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A Revised View of Italian Renaissance Architecture.

THE history of the influence of the architecture of the Italian Renaissance upon English architecture in the more modern period, exhibits rather a curious variation in one point of view. In the days of our fathers and grandfathers Italian architecture stood as the symbol for what was correct, refined, and Academic in the application of the classic orders to modern architecture. Palladio was its great name, attaining in England an almost proverbial influence as a kind of architectural high-priest, such as he hardly attained in any other country. Alberti, Vignola, and Serlio were admitted though lesser lights in the same form of art. When the late Sir William Tite founded his prize for the encouragement of the study of Italian architure, it was unquestionably this academical idea of it that was in his mind; he wished to promote the study of and taste for a correct application of the Orders, as an antidote to the threatening irruption of Gothic tastes. That the expression "Italian Renaissance architecture" could stand for much which is fanciful, original, and picturesque, is an idea which would almost have startled the older generations who just preceeded the Gothic revival. But the younger generation of Englishmen of the present day, without philosophising much on the matter, have begun tacitly to find this out for themselves; their sketch books tell the tale, filled as they are often with bits of picturesque and unhackneyed architectural combination and detail; unlawful incidents, such as would find no place in the Vitruvian or Palladian scheme of architectural design. It is partly on this account that even those whose natural leanings are towards mediævalism or what is akin to it have ceased to regard Renaissance architecture in that spirit of contempt and aversion of which Pugin first set the example, and to which Ruskin afterwards gave voice in his eloquent but absurdly exaggerated language. Even the scholastic architecture of the Italian Renaissance is now regarded with some respect by those who decline to take it as a guide; but our eyes have begun to be much more opened to the fact that there is a great deal in Italian Renaissance architecture which is much more than scholastic, and that the generation of mediævalists who poured contempt upon it were only contemplating one phase of Italian architecture, and that not the most interesting.

Mr. Anderson's book on "the architecture of the Renaissance of Italy" * is not therefore a new gospel on the subject: it is only a revised analysis to suit a position already tacitly taken up. But such a book was certainly required. The existing popular text-books, such as Fergusson's, take the old view of Italian Renaissance architecture as essentially an academic form of art; it was desirable that there should be a book for students and the public which would express the more comprehensive view of the subject which is now beginning to prevail. This therefore, is the excuse for the production of a small book on so great a subject as the architectural Renaissance in Italy; not to pretend to exhaust the subject, but to present it to the student from a new point of view.

The most important feature in Mr. Anderson's book is the emphasis which he lays on the earlier works of Renaissance architecture, which have been comparatively neglected by previous writers, who have regarded them merely as examples of incompleted progress towards the development of a purely classical style. Italian architecture, in fact, has till lately meant to the majority of architectural students the architecture of academic laws and the use of the Orders, and the student has been invited to concentrate his whole attention on the more symmetrical and imitative buildings of the later period, to the ignoring of the in many cases far more interesting and virile work of the earlier Renaissance. Thus has arisen the critical mistake of regarding the Italian Renaissance as merely an imitative period. That in the later Renaissance there was a good deal of cold imitation of Roman detail is true enough, and also that it was, as far as we know, the first time in the history of the art in which architects went back to the imitation of the details of an ancient style many centuries before them; so far the Renaissance marked a new era in architecture, a new method of procedure; but even in regard to this later and more scholastic Renaissance, though the details were borrowed, the main design was not; and the works, for instance, of Palladio, Peruzzi, and Sansovino, each represent a distinct principle of architectural treatment;

"Michelangelo's dome, that had hung the Pantheon [in heaven,"

was not a copy of the Pantheon. But in the earlier days of the Renaissance this scholastic imitation had not been systematised; the architects, under the influence of the revival of learning, no doubt turned to the remains of Roman art and drew inspiration from them and made use of some of their materials, but it was a use made in an exceedingly free spirit, in buildings many of which were entirely new architectural creations. The falsity of that view of the Renaissance as a merely imitative school of architecture has been commented on more than once in our pages; and we are glad to find an able and thoughtful critic like Mr. Anderson promulgating the same view:—

"It is true with regard to the details or materials of its composition that in the Roman Forum, or the Palatine Hall, or among the ruins of the Baths of Caracalla, one may find not merely the prototypes, but the approximate forms, nearly every feature which goes to compose the church or palace built fourteen or fifteen centuries afterwards. With as much truth, however, may it be said that originality has never been displayed to greater degree than by the architects of the Early Italian Renaissance, and that considered in relation to the previous direction of all architectural effort for centuries, the interiors of the Capella dei Pazzi, San Lorenzo, and Santo Spirito—all churches of Brunelleschi—are real works of genius. . . . In every way it becomes clear that those who consider the architecture of the Renaissance as merely an imitative style, and place it in a different category from all which precedes it, do so with a little truth and more error. If the Italians of the fifteenth century took the Roman forms and details as a basis, they built up a new style as different from the Roman as the Roman was from the Greek. There is, for example, a far wider gap between the Renaissance church and the Roman temple than between the Roman and Grecian temples; and such buildings as the Palazzi Strozzi and Grimani are unique, and have no relation of an imitative kind to anything in classic times."

This is no more than the truth, and it is well to have it set forth so plainly, not only

* "The Architecture of the Renaissance in Italy: a general view for the use of students and others." By William J. Anderson, architect, A.R.I.B.A., director of architecture and lecturer at the Glasgow School of Art. London: B. T. Batsford: 1896.

for architectural students, who may use the book as an introduction to the study of Renaissance architecture, but also for those of the public who may be induced to read it, and who are accustomed to follow with too implicit belief Ruskin's absurd and over-acted denunciation of all Renaissance architecture as a sham. There is, however, one important point which might have been referred to in the Introduction (from which the above quotation is taken), viz., the extent to which architecture became a personal art at the Renaissance. It is not more the style of the country or of the age that we recognise in a Renaissance palace or church, than the treatment and manner of the special architect whose work it was. This fact represents the most marked and unquestionable distinction between the condition of architecture at the Renaissance as compared with any earlier period the works of which are known to us. There may be two or three ancient buildings which have the air of individual taste and intellect strongly marked on them. The Erechtheion is one. St. Sophia seems to have owed its grand design to the personal genius of its architect, since we know of no precisely analogous building before it. There is Peterborough west front; a distinctly individual idea. But in general both the Greek temple and the Gothic cathedral affect us as manifestions of an impersonal architecture, carried out according to a received programme. With the great Renaissance buildings it is different; they are each stamped by the personal character and predilection of their architect. Mr. Anderson seems hardly to have realised, or at least to have pointed out, this essential fact with sufficient emphasis, though he does lay stress on the influence of the personal genius of Brunelleschi.

This latter great architect can only partly be claimed by the Renaissance, for Santa Maria at Florence was essentially a mediæval building, and Brunelleschi's dome a mediæval dome, more like an octagonal vault than a dome, and pointed in section. It was in some of his smaller works that Brunelleschi fairly took up the new form of architecture. It is curious, and it is an evidence of the free and unfettered manner in which architecture was at this time practised, that while Brunelleschi was following classic examples in some of these smaller works, the Riccardi Palace was commenced, and the Strozzi even a good deal later; buildings which are in most respects far more mediæval than classic in feeling, the only effect decisively classic about them being the huge and strongly marked cornice, which was proportioned not to an Order, but to the whole height of the building. In drawing attention to the grandeur and great projection of these cornices, the author omits to show by a section what exceedingly artificial and unstructural creations they were; the cornices actually overhang to a much greater extent than the width of the walls, so that they must be cramped down; we do not know whether any one has had the opportunity or the curiosity to examine into this, but a published section of the Strozzi palace, which we may assume to be fairly correct, gives one a most uncomfortable idea as to the seating of the cornice on the wall.

Still more strange does it seem that almost simultaneously with the erection of buildings of such massive grandeur and breadth of treatment as these two palaces, Alberti should have thought that he was bettering architecture by the production of so tame and flat though elegant a piece of commonplace as the Rucellai palace, that parent of pilasters, a building which represents the wrong side, the pedantic side, of Renaissance architecture, and seems like a prophecy of what it was to come to in the later period, when too much learning and the desire of reproducing Roman work had flattened and dulled the real life out of the architecture. The fact, however, that Alberti cared to do this kind of thing of his own personal motive and apart from any general tendency at that time to architectural pedantry, is another proof of the extent to which architecture had come to be governed by the personal taste of the individual architect.

The scope and object of Mr. Anderson's five chapters or lectures is to show that Italian Renaissance architecture was really of far more interest, originality, and variety, during the earlier period which has been least studied and illustrated, and when the idea of Classic precedent was less predominant, than in the later period of Michelangelo, Palladio, and Vignola, when precedent was all-powerful; a period which has been commonly regarded as the culmination of the Italian Renaissance in architecture, whereas Mr. Anderson frankly heads his last chapter "Palladio and the Decline." There are in fact plenty of architects, in the present day, even those of Classic tendencies and sympathies, who will agree with him in this view—who have in fact long agreed with it; but we are not aware that it has been so defiantly propounded in a text-book before. Mr. Anderson begins with "The Fifteenth Century in Florence," the chapter which, along with the Introduction, we have been hitherto considering. This is followed by a parallel chapter on the "Early Renaissance out of Florence," touching on such examples as the Certosa, and on the work of Bramante, who, if the Santa Maria della Grazie at Milan is really his, could be as original and as free from the trammels of classic precedent as the architects of the early Florentine palaces. In his liking for covering the surface of archivolts and pilasters with carving, slightly confined by a thin fillet, he anticipates some of the feeling and peculiar effect of the *plateresque* school in Spain. With this we are directed also to the earlier work in Venice and the North Italian cities, which, as the author truly observes, is even stronger evidence than the Florentine work against the charge that Renaissance architecture was merely imitative. The next chapter deals with the central period and the culmination in Rome, where, by the way, Bramante, in the last period of his career, seems to have become converted to pedantry and the pilaster ideal, and did with the Cancellaria Palace as poor a feat as Alberti with the Rucellai, as far as general vigour of architectural conception is concerned, though no doubt some of the details are beautifully refined. One important element, however, illustrated in the Cancellaria and elsewhere, which the author draws special attention to, is the variation in the spacing of the pilasters, by which they are divided up into wider and narrower intercolumniations alternately. The work of Peruzzi is also largely illustrated and described in this chapter, in which also we naturally come upon the subject of St. Peter's and the dealings with it of San Gallo, Raffaelle, Bramante, Peruzzi, and Michelangelo. "Roman influence in the north of Italy" forms the subject of the succeeding chapter; the last, as already mentioned, being occupied with "Palladio and the decline." Palladio the author classes as undoubtedly the cleverest man of the late Renaissance, an architect of fine perceptions and no little originality. The praise of the latter epithet he, perhaps, hardly deserves; at least, where he was original, it was by no means always in the best manner. The author comments on the fictitious importance which his name has obtained in England: "Why he should be better known and more honoured than Brunelleschi, Bramante, Peruzzi, or Sanmicheli, it is difficult to understand, unless it be that he showed what could be done on a small scale and with simple and cheap materials." That would, no doubt, be one reason for his being dear to people who erect buildings in this country. Whatever the cause, it is certain that with many old-fashioned Englishmen, to this day, the name of Palladio is a kind of synonym for architecture.

The book makes a very good summary of the subject in a small compass, and the numerous illustrations, mostly reproduced from photographs, serve to give a very fair panorama on a small scale of the salient qualities of the principal classes of architectural monuments of the Renaissance.* It may be recommended as an introductory book both to students and the laity. Among special points of criticism we are glad to see that the author repudiates the now popular idea that a painter's or a sculptor's training makes the best architect. The fact that a few of the great architects of the world had found their way into the art through a sculptor's or painter's studio, only shows, as he observes, that special capacity will assert itself and find its true outlet. "Many painters and sculptors made poor architects, and hundreds of them never indicated any architectural skill whatever. The best of the architects were those who laid aside everything for their art, and became no longer painters and sculptors but architects." And this is really the common sense of the matter. We also entirely concur in the advice to look after small works of the Renaissance as attentively as after the great buildings, as the smaller ones may often be found to be the most perfect examples of the art. Lastly, we may draw attention to the important distinction which the author suggests between the art of the Renaissance and "the fleeting revivals of styles in modern days." "Had the Italian church builders of the sixteenth century pursued the architectural methods of the English Gothic revivalists of the last generation, they would have attempted to reproduce the temples, or at least the law court or Basilica, or the form of the Roman houses where the earliest Christian churches assembled. This was not their method, and where their arrangements were not virtually original, designed to meet the wants of the time, they were developments of Mediæval or Gothic practice, that is, of the period immediately preceding." That is perfectly true, and it is a distinction often lost sight of by those who rank the great architectural movement of the Italian Renaissance with an ordinary "revival."

* This system of illustration by reproductions of photographs, which is now becoming fashionable in books on architecture, no doubt saves time and trouble, and is in a sense more trustworthy than drawing, but it does not give a book the same interest, especially when the perspective is seriously distorted by the photograph.

THE EFFECT OF EXTRA WORK ON THE DATE OF THE COMPLETION OF BUILDING CONTRACTS.

IT is very seldom that what may be called a pure point of building law comes before the Court of Appeal, so rare, indeed, that even if the recent decision in the case of Dodd *v.* Churton (Law Reports, 1897, 1, Q.B.D., p. 562) were on a point of less importance than it is it would be worthy of some attention. But the practical value of the case in question makes it desirable that it should receive detailed notice.

There is no point in building arrangements more vital than the question of the date of the completion of a contract. It is one which too often gives rise to much disagreement, more especially when some work extra to the original contract has been done. No prudent building owner will fail to have a date for the completion of the work inserted in a contract, and also have a scale of penalties to be paid by the builder added in case the latter does not complete the work by the specified date. In the simple but rather exceptional case of a contract which is completed without extras there can be, as a rule, no difficulty on this point. If the work is not done by the date which is specified, then the builder has to pay the penalties under the contract.

But nine-tenths of the building contracts of the present day are not completed as originally entered into—some extra work is almost certain to be ordered. It is then that complications frequently arise, since it is obvious that the completion of the work by a specified date may be prevented if the building owner requires extra work to be done. The non-completion necessarily brings the question of the penalties to the front, and it is here that there has been some uncertainty as to the law, which the recent case of Dodd *v.* Churton appears to have finally cleared up. In Holme *v.* Guppy, which was decided in 1838, and also in Thornhill *v.* Neats, decided in 1860, the ordering of extra works and their execution by the builder was held to wholly put an end to the penalty clause in the contract. In Legge *v.* Harlock, decided in 1848, it was held that the result of the extra work was "to enable the builder to have an allowance made in respect of the days necessarily occupied in the execution of the additional work" (see Roscoe's "Digest of Building Cases," 3rd ed., p. 58). This decision, it is obvious, has an important practical result, different from that of the two first-named cases, since, in them the question of penalties was wholly put an end to. But, as pointed out in the work from which the above extract is taken, according to the contract in Legge *v.* Harlock, if extra works were ordered, they were to be finished in a reasonable time. In other words, the question of the date of the completion of extra works was provided for in the contract.

In 1870 we get to a case in which the date of the completion of any extra works was specified with a will, since the builder bound himself to complete the contract, extras included, by the original date. The Court of Queen's Bench held that if a man was foolish enough to bind himself under a penalty to do something which was impossible he must be held to his bargain. In the recent case of Dodd *v.* Churton there were the usual circumstances. There was a date fixed for completion of the contract; extras were ordered—these delayed the completion of the contract. The value of these additional works was 22*l.* 8s. 8d., and it was said that a reasonable extension of time would have been a fortnight, but the builder did not, in fact, complete the contract for twenty-seven weeks beyond the date originally specified for its completion. The building owner consequently claimed penalties for twenty-five weeks. But in the argument of the case, the middle course, as it may be called, which had been adopted by the building owner, seems to have been thrown over by his counsel, since he relied on the St. John's College case, and argued that the true construction of the contract was that the builder had undertaken to do the original and any extra work by the specified date. On the other hand, the counsel for the builder argued that the case was within the general rule, namely, that the building owner by ordering extras had put a complete end to the penalty clause.

This was the view taken by the Court of Appeal, who held that the Oxford case was exceptional, and that unless a contract in clear words stated that extras were to be completed by the date originally specified then that this case did not apply, and that there was no date fixed for the completion of the contract. This decision is no doubt sound law, but it is rather hard on the building owner, and we think that the Court, while holding that the penalty clause was put an end to so far as regards the date originally fixed, yet might have implied a contract to finish the work in a reasonable time. It is absurd that extras, which properly lengthen the time of execution of a contract, we will say, for fourteen days, should allow a builder to delay the completion for perhaps fourteen weeks.

What is the practical matter, then, for parties to building contracts to bear in mind, having regard to these various decisions? One thing is clear, that no builder should bind himself by such mad conditions as in the St. John's College case. In Legge *v.* Harlock we find the reasonable solution—there should be a stipulation in the contract that extra works, if any are ordered, shall be completed in a reasonable time: or in such additional time as may be allowed by the architect. This is fair to both parties, whereas the rule laid down in Dodd *v.* Churton is not fair from a common-sense point of view to the building owner. As we read it, the meaning of Clause 15 of the conditions agreed upon by the Institute and by the Central Association of Master Builders is in accord with the decision in Legge *v.* Harlock. The recent decision of the Court of Appeal shows how desirable it is for well-known conditions to be used in building contracts, and not those which are drawn by some lawyer who is probably unaware of the various decisions on these technical questions.

NOTES.

Age of the Earth.

IN a communication to the Victoria Institute the other day, Lord Kelvin discussed the "Age of the Earth as an abode fitted for life," in which, however, we fail to find any new data that could be utilised in the solution of the problem. The date of the solidification of the earth he now places between twenty and thirty million years ago, and he arrives at this date by judging of "the properties of rocks and by underground temperatures." This last is delightfully vague, and when we begin to know something of underground temperatures we may be able to follow the Glasgow Professor; as it is we are in daily expectation of having our views on that subject modified by new discoveries, for during the past few years very divergent results have been obtained in actual practice as to the rate of increase of underground temperature. And if the deductions are mainly based on the "properties of rocks," (presumably igneous), we shall be glad to learn of any two authorities who are in agreement with each other respecting the temperature under which any holo-crystalline rock has settled down. Lord Kelvin is a champion antagonist of the doctrine of uniformity in geology, and, although it is not fashionable, we are rather inclined to agree with him on that point. At the same time, it is difficult to reconcile the grounds for that antagonism with the mathematical progression demanded by his calculations. If "seventeen million years" have elapsed since the beginning of Cambrian time, biologists will want more than double that for the estimate of the date of the first appearance of life on the globe. These oldest fossiliferous rocks contain the remains of some of the most highly organised invertebrata, and some of the genera have very little altered up to the present day. The study of the phylogeny of Lower Palæozoic life renders it impossible for the palæontologist to accept any estimate of time for the evolution of pre-Cambrian life. We do not follow Lord Kelvin, therefore, in his observations on the biological aspect of the problem. At the risk of being included amongst the "antiquated geologists of thirty years ago," we venture to suggest that more facts are wanted before any scientist is warranted in attempting to fix the date of the appearance of life on the globe. The younger school of geologists also will have none of these precious theories, which, as a rule, have no shadow of foundation in fact to rest upon; and Lord Kelvin is hardly correct in stating that geologists "no longer consider the question of absolute dates as outside their province."

The Scaffolds for Jubilee Day.

A CORRESPONDENT in the *Times* makes a rather exaggerated suggestion as to the danger of an extensive fire if one of the temporary scaffolds on the line of route of the procession caught fire. To say that "a chance spark or an unextinguished match would quickly set them alight" is hardly true. Thick wooden joists and planking are not easily set on fire by a burning match falling on them. Such danger from fire as there might be would rather arise from a match falling on any accumulation of shavings or paper, or other easily inflammable material, accumulated in the spaces under and behind the staging. These spaces, which will be invisible and not to be got at during the procession day, ought to be carefully examined and cleared of rubbish the evening before the 22nd. If that were properly done the danger from fire would be hardly appreciable. What we should feel more anxious about is the stability of some of the scaffolds under the pressure of a crowded mass of persons all striving to lean as

near the front as possible; we do not refer to the scaffolds erected in steps on a slope — those are safe enough — but to some of the very high narrow stagings which we observe are getting erected against nearly the whole height of some of the street buildings. These ought to be securely tied into the buildings behind them, and we feel some doubt whether this has been adequately done in all cases, people being naturally anxious to damage their buildings as little as possible. But the whole of these erections are liable to the supervision of the District Surveyors, so that we may hope they will be well looked after.

Paris Exhibition of 1900.

THE Committee which is charged with the arrangement of the Paris Exhibition of 1900, has drawn up its scheme for the "retrospective" exhibition of Fine Art and the exhibition of Decorative Art, in its main lines at least. According to the programme, drawn up by M. Molinier (assistant-curator of the Louvre), the Retrospective Exhibition will have the whole of the small palace at the Champs Elysées and part of the large palace on the line of the Avenue d'Antin. In the small palace will be collected objects of decorative and industrial art from the earliest date to 1800, classed in twelve series according to chronological succession. The upper portion of the Retrospective Exhibition will include works of art from 1800 to 1889, installed in a portion of the large palace; sculpture on the ground floor; painting and industrial art on the upper floor. This portion of the exhibition will be divided into five parts, corresponding to the First Empire, the Restoration, the reign of Louis Philippe, the Second Empire, and the modern Republic. Between the different galleries will be rooms for visitors to rest, furnished in various styles so as to illustrate the progress and change of style in furniture design. In connexion with the subject of the Exhibition, it may be mentioned that it appears now to be definitely settled that the annual Salons, until after the 1900 Exhibition, are to be accommodated in the Galerie des Machines.

Position of Choir and Organ in Churches.

A LONG letter on this subject from the Bishop of Chester, in Monday's *Times*, is gratifying as indicating that the labours of the Joint Committee of the Institute of Architects and the College of Organists, appointed some years ago to consider the question of the best position of the choir and organ in churches, are not entirely thrown away, and that their Report, though not final in its nature, is now influencing clerical opinion. The Bishop quotes largely from this Report, and with evident approval; but when he refers to the conservatism of architects as standing in the way of improvement, we are inclined to suggest that it is rather the conservatism of the clergy that is at fault. The scheme of the chancel choir is undoubtedly favoured by the clerical party from the idea that there is a traditional ritualistic propriety in it, and we imagine that in many cases an architect would not be allowed to dispense with the long chancel and the choir stalls in it, even if he wished to do so. Yet the idea of the traditional propriety of the arrangement is only illusory; it dates from the days when the choir were also the clergy, and were a segregated body. In the present day the lay choristers should be more properly regarded as a portion of the congregation. The Bishop of Chester seems to be fully persuaded of the unsuitability, on musical grounds, of the "organ-chamber" (it is something to have got that opinion on record from an ecclesiastical dignitary), and evidently favours the idea of a west-end organ with a choir on either side of the nave, which we have long regarded as the true solution. The choir are then really in a position to lead congregational singing, and a large organ has at the same time a chance of being heard with its best effect.

Signalling Through Space.

THE Royal Institution was crowded on Friday evening last week, when Mr. Preece gave a lecture on "Signalling Through Space Without Wires." He first described a primitive system which was successfully used to signal across the Sound of Mull when the submarine cable broke down in 1895. The principle employed was that currents in a long straight wire induce currents in a long wire parallel to it, even when they are many miles apart. Another system described was that of communicating with lightships by means of a cable coiled at the bottom of the sea under the ship. The currents in this cable were to induce currents in another independent cable coiled round the ship. This method, however, was a failure, as the currents induced in the iron hull of the ship screened the coils from one another. He then described Signor Marconi's system, about which it now appears much needless mystery has been made. It was found to be a modification of a Hertz oscillator and a Lodge coherer. It was stated that by its aid signals were transmitted across the Bristol Channel between Penarth and Brean Down, a distance of nearly nine miles. He also said that secrecy could be perfectly obtained by its use, as only a receiver tuned to the particular frequency would respond to the signals. We do not see, however, what is to prevent any one from tuning a receiver until it answered the P.O. signals. It is well known to mathematicians that the resonance of such a receiver is not at all marked, and that it will respond to electric waves throughout a wide range of frequency. For shipping and lighthouse purposes this system has a future before it, and it will be interesting to see whether the Post Office or private enterprise will be the more successful in adapting Hertz's and Lodge's discoveries to practical work.

A Central Railway Station.

A RUMOUR was set afloat last week that the Midland Railway Company were negotiating for the purchase of the site of the Foundling Hospital, with a view to erect on it a central station. This report, we are glad to hear, has now been contradicted by the Company. The idea is one, however, which must take practical form sooner or later. The position of the termini of the Great Western, the North Western, and of the other lines which end north of Euston-road, is quite an anachronism at the present time. In the same way the terminus of the South Western is extremely inconvenient. We have therefore no doubt at all that, cost what it may, one or more central stations will, sooner or later, be seen in London. It does not necessarily follow that all trains will arrive at or start from this point, but that there will be some concentration of traffic partially, at any rate, in a central place, we feel no doubt whatever. It is to be hoped, however, that it will not be at the cost of destroying a building of so much historic interest as the Foundling Hospital, and filling up one of the open spaces of London.

The Public Health Act.

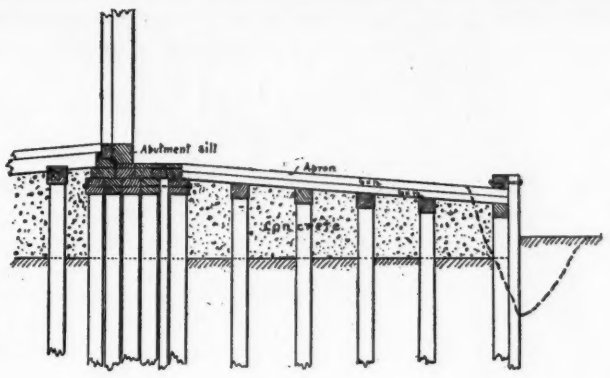
A SOMEWHAT curious point in regard to by-laws under the Public Health Act, 1875, was decided shortly before the Courts rose for the Whitsun Vacation. It was declared by a by-law that any person who should construct a sewer should place it at least 50 ft. from the building with which it was connected. Various objections were taken to what was an unreasonable by-law, and that it could not apply to alterations to old buildings. These the Court brushed aside, they were not tenable. A third objection was overruled, but not in so satisfactory a manner. How was a cesspool to be made 50 ft. from a house if the owner of it did not possess the ground to this extent? The answer given was that if this were so the cesspool could not be made in the case of a new house, and in the case of an old one the owner was not bound to construct a new cesspool. It is, however, hardly conducive to improved sanitation to allow cesspools to remain at less than a given distance from houses, if in the case of new buildings they are to be at some specified distance away. It is also to be observed that in the case in question the old cesspool was 3 ft. from the house, and was closed by order of the Inspector of Nuisances, so that the owner was not a voluntary agent in the matter. As regards new houses in streets, a by-law such as that which was under discussion in Simmons *v.* the Malling Rural District Council appears to contemplate a system of drainage and not isolated cesspools.

Electric Lighting by Reflection.

IN a new banqueting hall in connexion with the Royal Palace Hotel, Kensington, an experiment has been tried which was recommended years ago in our columns, in the early days of electric lighting, viz.: lighting a room by reflection from the ceiling, the actual lights being concealed. In the room in question some hundreds of 16-candle-power lamps are hidden under the cornice and the light is thrown on to the ceiling and thence reflected down into the room. The work was carried out by Messrs. Donnison, Berlyn, Sillem, & Co. Of course a certain amount of light is wasted in the reflection, but the glare of the lamps is removed from the eye, and there is also the pleasing effect produced of a light from no apparent artificial source—a kind of daylight effect.

A Cause of Leak in a Dry Dock.

THE *Scientific American* in a recent issue gives some information as to a leak in the dry dock in Brooklyn Navy Yard, and its probable cause, which may be of interest to engineers. Water had been percolating into the dock beneath the apron which extends from the outer sill into the entrance channel. The apron consists of two layers of 12 by 6 timber on a bed of concrete and piling, with sheet piling 12 by 8 on the side towards the entrance. A diver sent down to examine found that a hole had been torn open at the outer edge of the apron, exposing the underlying bed of concrete, and that a large hole had been formed in the bottom



Section of Apron, Brooklyn Dry Dock.

mud of the channel round the damaged portion. The following is given as the probable explanation:

"The construction of the dock was carried on from the inshore end toward the channel, and the apron was built while there was yet a couple of hundred feet of solid ground between it and the Wallabout channel. The removal of this material was done by a floating steam dredge, and it is supposed that in excavating the channel near the apron the bucket caught the edge of the apron, tearing up the sheet piling and breaking away a portion of the concrete and the timber flooring. The water was now free to enter beneath the concrete floor and work its way along the sides of the dock. Under the great head of from 26 to 29 ft., the pressure upon the structure would be enormous, and would easily account for the bursting in of the walls on the occasion already referred to."

We give a reduced copy of the diagram accompanying the description. The dotted lines enclose the portion which was damaged as described.

Indian Art and the Jubilee.

A CORRESPONDENT, well known in India, draws attention to the indifferent manner in which we treat artistic gifts from loyal and distinguished Indian subjects of the Empress, as especially exemplified in the case of the Gwalior Gateway, a remarkable piece of work by Indian artisans, executed at the cost of the Maharajah Scindia of Gwalior and presented by him to the South Kensington Museum. This gateway was illustrated in the *Builder* eleven years ago (in our issue of July 13, 1886) by a beautifully executed engraving by Mr. J. D. Cooper, the gateway being then temporarily placed in the Indian and Colonial Exhibition held that year. It might have been hoped that such a costly and beautiful piece of work as this, the gift of an Indian Prince and the work of Indian artisans, might have had a permanent and conspicuous place in the South Kensington Museum. Instead of that, it has been ever since stowed away, in pieces and wrapped in cloths, in a lumber-room. What makes matters worse is that, but for a hint given to the Maharajah that South Kensington would be glad of the work, a fine site would have been given to it in Calcutta. At the time when we are inviting strangers from India to the celebration of the Jubilee of the Sovereign one of whose titles is "Empress of India," this is a very charming specimen of the way in which we treat munificent artistic gifts from our Indian tributaries.

Architectural Association Students' Designs.

THE drawings executed in the Architectural Association School of Design during the session 1896-7, which have been on view for a few days at 56, Great Marlborough-street, show a highly creditable degree of invention and originality. The subject given to the junior students was "A Westmoreland Hill Church." Most of the students seem to have aimed at producing what ought to be the essential qualities of a country church in a hill district—simplicity of design and solidity of construction, with rather low and wide proportions. The prevalent defect in the general character of the designs is, perhaps, that, in aiming at simplicity, ecclesiastical character has been rather lost sight of, and some of the designs have consequently a rather too utilitarian character. The gable end of Mr. G. S. Nicol's design, with its stepped coping executed in large flat thin stones, suggests very well the kind of work which can be carried out with local materials. The weathervane to this is a good design, and generally speaking, the metal details in several of the designs show a good deal of fancy and originality, as in the hinges in Mr. Hawes's design, with birds *en silhouette* as if seated on them; Mr. Green's design for a hanging lamp, in a flat circle of gilt metal with decorative foliage inside it, also kept flat; the scraper is also well treated. Mr. Brierley adopts a ship vane with lateen sails, the hull treated with double sides of metal so as to give a modelled representation of a hull, but this we think out of place in a vane, which, for its practical purpose, should be kept as flat as possible. What is the point of the "emu's egg" hung beneath the lamp in the same set of drawings; is it decorative or "symbolical?" The general character of a hill church is perhaps best given in Mr. Reckitt's sketch, with its wide-spreading low-pitched roof and short buttressed tower. As the work of young students there is enough in these designs to show a great deal of promise for the future. The few drawings by the Advanced Class of Design, hung in the passage, were, we presume, a selection only; they are, as might be expected, less fanciful and more practical in character; the only remarkably original suggestion is that for a country Bank entrance, by Mr. G. C. Carter, with a bas-relief in marble overhanging the doorway in an odd but effective fashion; the remainder of the front is only like an ordinary brick house, and wants the character of a Bank.

M. Puvis de Chavannes.

THIS great decorative painter has now happily entirely recovered from his illness, and has been able to send to the Champ de Mars exhibition, during the last few days, his new cartoon for a portion of the decoration which he is commissioned to carry out at the Panthéon.* The composition, which is divided into three parts, represents the legend of Ste. Géneviève coming to revictual Paris when beseiged by Clovis. The compartment on the left shows the long procession of starving people coming out from the besieged city. In the centre Ste. Géneviève stands in a boat leading a flotilla laden with food. In the third, or right-hand portion of the picture, men are shown disembarking the cargo from the ships. It is hoped that this fine work will be exhibited in its completed form next year. The study of it makes one again regret the unfortunate division of the decoration of the Panthéon among different artists of different schools. The whole work ought to have been put in the hands of M. Puvis de Chavannes.

ARCHITECTURE AT THE ROYAL ACADEMY.—IV.

DECORATIVE work is not very largely represented in the architectural room this year. We find under this head, however, two important pieces of design for church furniture or fitting. One of these is Mr. Caröe's design for a bishop's throne (1,750), a pencil drawing, lightly tinted, and very delicately though not laboriously finished, showing a wooden structure in the orthodox canopy form of a bishop's tomb, gothic in general outline and feeling, but with a certain amount of eclectic freedom in the details: the general effect is very satisfactory, rich in detail and sufficiently constructive. The other design of the same class is Mr. Pearson's rood screen for Bristol cathedral (1,924), a rather heavily worked pencil elevation showing an erection with three large ogee arches with heavy cusping, with canopied figures and open tracery panels above; the dwarf wall on which the woodwork rests is treated with geometrical tracery, and the same kind of geometric design repeated in the wrought iron gates. General effect—dignified and solid but not very interesting. Some less important works of the same class show more character, notably Mr. Eden's rood screen for Blisland Church Cornwall (1,808), the lower part in light tracery compartments, the upper portion panelled solid and forming a background for two coloured figures in relief looking up towards the central cross, and two figures of cherubim, one at each side. There is such a curiously old-world look about this little bit of work that we inquired whether it was actually new work or a representation of an old reredos; but it is new and not yet finished, and is creditable to the fancy and feeling of its designer. Mr. Lacy is also original, but not in a way we like so much, in his design for proposed screens and decoration for All Saints', Cambridge Circus (1,774), which shows a plain thinly built wooden arcade, apparently painted on with foliage or some other light decorative device in colour on the white ground; this, as well as the framing of the centre gates, looks bright and piquant but certainly rather gay and secular. Mr. Rose's "New Altar St. Mary's Chaddesden" (1,819) is a sketch of an interior in which we see more of the chancel screen than the altar; the screen is effectively treated in a quiet way, with tracery at the top of the panels, so treated and truncated as to give the effect of a straight carved band along the top; the cross-barred iron grating in the openings between the mullions of the screen has rather an odd effect in combination with the woodwork. In the drawing of the new stalls, organ-case, and screen for Kineton Church (1,800). Mr. John Belcher shews a small organ case very like a Renaissance one, and which has at all events the merit of exhibiting that simplicity of idea and free flow of line which characterises many of the old English organ cases of the period from which this is imitated. Mr. Joass exhibits a reredos in gesso and colour (1,915), the lower portion in large picture panels with decorative borders between them; the upper line of the whole is treated in bold reversed

* This fact again illustrates the difference between the reasonable and courteous treatment of artists by French exhibition juries, compared with the red-tape system of snubbing prevalent at the Royal Academy. Imagine any artist presuming to ask the Academy to let him send in a work when the show was half over, because he had been too unwell to finish it before!

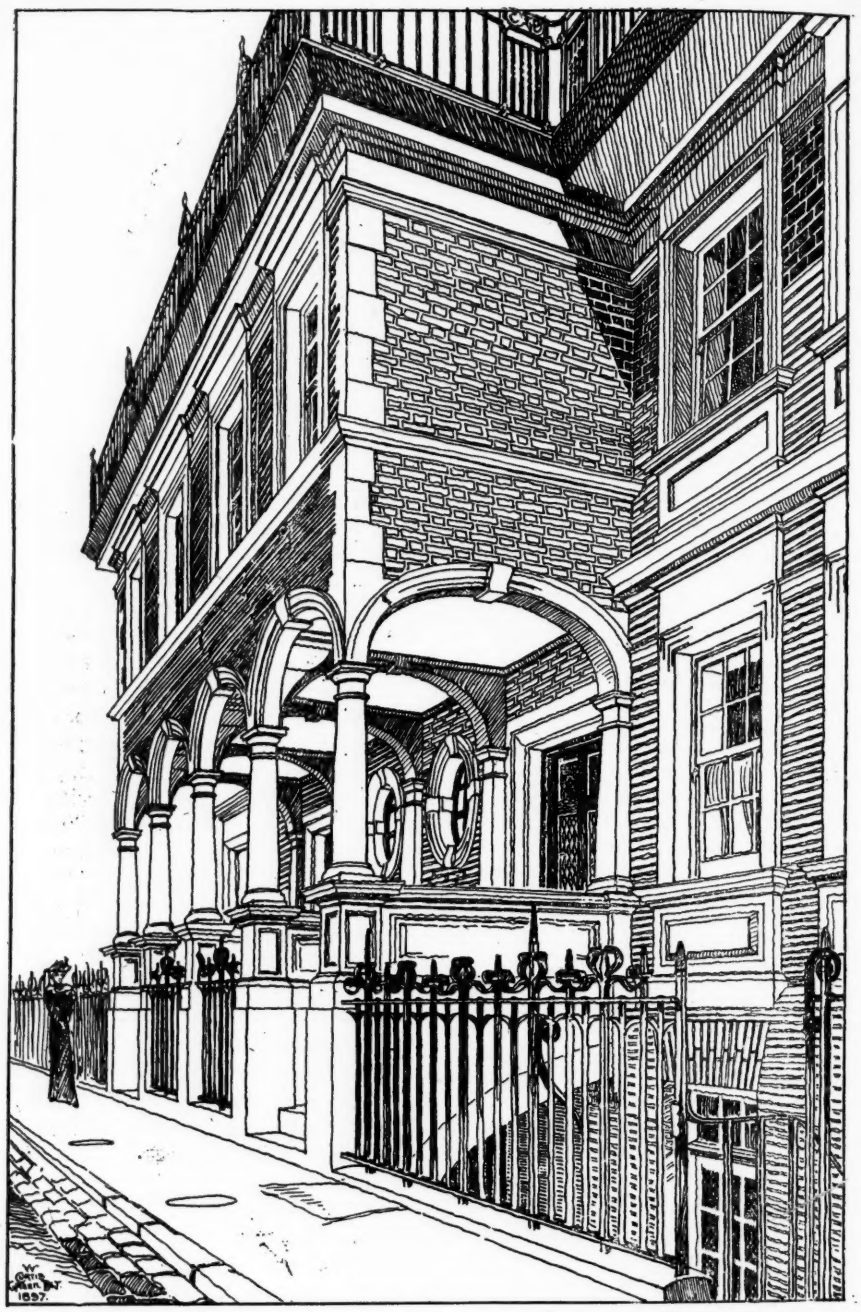
curves, enclosing figure subjects on a gilt ground; the general effect is very good and somewhat new.

Among secular designs of decoratve work there is Mr. Shaw's sketch for bronze gates (1,779), a powerful "blend" of figures and scroll work producing a rich and very well filled up design, which would have a dignified effect in execution; the only thing we do not quite like is the cresting, which looks a little too accidental in character, and is thus out of keeping with the very symmetrical design of the rest. Mr. Pawley's design for wrought iron gates for Dacre Court (1,790) has the defect of not exactly showing which are the gates—the opening portion, whether it is between the pilasters (as they may be called) or whether these are part of the gate. A gate and grille should show the distinction between the actual swinging gate and the standing portion of the metal work. The broad band of scroll-work over the top has a good effect, suggesting a kind of entablature to the pilaster forms. Mr. Dymoke Wilkinson shows "a suggested drawing-room fireplace in coloured gesso-duro, stained alabaster, and gilded bronze" (1,867), but all this colour is only described in the margin, not shown on the drawing. We do not like the double curve of the top of the fireplace opening; it is weak and unstructural. Mr. Christopher Carter's design for a font in cast and decorated lead (1,872), which we accidentally passed over among the ecclesiastical work, is a really original and clever piece of design, though we cannot think the material a very happy one to use for a font. There is a fancy for lead-work, however, now, and it is natural that we should find attempts made to apply it where it has not been applied before. Messrs. Waring exhibit a very good free sketch in pencil of a Dining Room in Dutch Renaissance manner (1,926), the general effect is just roughed out, and no detail finished; its chief interest is as a capital piece of pencil work. Mr. L. Turner exhibits a design for a carved wood panel (1,910), that is, a pencil drawing for a piece of naturalistic wood carving in high relief; a rather odd exhibit; it would seem so much better to have exhibited the carving itself. Mr. Beresford Pite's three doorways of street houses adorned with sculpture (1,826-7-8) may be considered as coming under the head of decorative work; they have all been illustrated in our pages from photographs, but the architect's own freely-handled water-colour drawing gives them a new interest, and we are glad to see them grouped together, as a suggestion of what might be done with our street entrances by the union of architectural detail and sculpture.

Of stained-glass design there is not very much, and hardly anything that calls for special remark; Mr. W. Aikman's two designs for single-light windows, "The Birds of the Bible" (1,909) and the "Tree of Life" (1,911) have the appearance of original designs, but cannot be well seen, as they are small drawings and hung rather high. There is some originality of treatment too, in Mr. Fisher's east window for Thorngumbald Church (1,877), the glass above and below the figure subject being treated in plain leaded squares with decorative emblems in them; the whole looking perhaps rather more like a domestic window for the entrance hall of a house than a church window. Mr. E. Ingram Taylor's design for a painted frieze (1,840), a bold piece of conventional foliage work, looks however more like a design for wall paper than painting. Mr. Pinhorn Wood's "Design for a Nursery Frieze" (1,806) may pass as such, there is not perhaps very much "design" in it, but it would look bright and pretty, which is the main point in nursery decoration. Mr. Tennant Potter exhibits a good bit of illuminated work under the title "Mercy" (1,866), a central figure with a minutely diapered gold background, surrounded by a wide border in boldly coloured foliage.

Among drawings of ancient work Mr. H. C. Corlette contributes several careful measured and coloured drawings of the decoration of St. Savin, including a complete coloured section of the church, with its long, cylindrical Romanesque columns, each coloured differently. The details of painted decoration, which are given to a larger scale, are very interesting, and almost Greek in precision and purity of line. Mr. C. A. Nicholson contributes an effective monochrome water-colour drawing of the portal of St. Sauveur, Dinan (1,778) Mr. A. E. Henderson has given well the character of the interior decorative work and furniture in Or San Michele, Florence and in the Capella Palatina, Palermo (1,809, 1,815), but his best exhibit is a small and delicate water-colour drawing of a group of columns at the south-west angle of St. Mark's (1,816). This is an exceptional little bit of illustrative work, and is one of the best things in the room. Mr. Brewer sends his pencil drawing of the interior of the western choir at Bamberg Cathedral, which has been illustrated in our lithograph pages; it is in pencil, and seems rather to show that this is not a very good medium to use where an effect of dark shadow is required over a considerable part of the work, as in the centre portion of this drawing, which has a rather loaded effect; the portions in light are very successfully and freely handled. Lastly, Mr. Corlette contributes also a very careful and highly-finished water colour drawing of the curious painted sculpture of the late mediæval period, in Albi Cathedral, figures which have the appearance of large dolls stuck in among the architecture, worth careful record as curiosities, but hardly in any other light.

This concludes our notes of a collection which on the whole can hardly be said to be equal to the average interest of the Academy architectural room.



Sketches of London Street Architecture.—XIV. Nos. 2 and 3, Balfour-place, W. Messrs. Balfour & Turner, Architects.

THE '91 ART CLUB.—This club will hold its Annual Exhibition of Members' Works at Clifford's Gallery, 21, Haymarket, during the latter part of the month.

SKETCHES OF LONDON STREET ARCHITECTURE.—XIV.

NOS. 2 AND 3, BALFOUR-PLACE, W.

THESE houses were erected in 1892. The materials used were red Suffolk bricks with brown Portland stone dressings. The only unusual feature which needs explanation is that there are three floors at the front of the house, taking up the same height as two floors at the back; *i.e.*, the kitchens are 14 ft. 6 in. high and dining-room 14 ft., whereas the heights of the rooms in front are—basement 9 ft. 3 in., hall 9 ft. 9 in., and library 8 ft. 9 in., thus bringing the front and back drawing-rooms on the floor above, on one level.

The area railings are of wrought iron and the balcony railings cast iron.

Messrs. Balfour & Turner are the architects.

CHOLERA HOSPITAL FOR CARDIFF AND BARRY.—The official inspection previous to the taking over of the new cholera hospital on Flat Holm Island by the Cardiff Corporation was made recently by the Health Committee. The hospital buildings consist of a ward pavilion and a laundry block. The pavilion contains two wards, each 36 ft. long, 24 ft. wide, and 14 ft. 6 in. high, providing together accommodation for twelve patients. The buildings are constructed of local stone, quarried on the island. There has also been erected a crematorium for disposing of the bodies of any patients who may die of cholera. The whole of the work has been carried out by Messrs. Cadwallader & Hockridge, of Cardiff, from the designs and specifications of the Borough Engineer, Mr. W. Harpur. The cost of the work was nearly 3,000*l*.

THE LATE MR. GILBERT SCOTT:

BY AN OLD PUPIL.

[FOR three or four weeks back we have been endeavouring to persuade one or other of Mr. Gilbert Scott's former pupils or friends to write out some short but reliable account of the life and work of an architect who, though of remarkable and exceptional ability, was little known in the general architectural world. Generally speaking, we have found the personal friends of a deceased architect or artist very glad to have an opportunity of putting on record what they knew of him. It is an odd exception in this case that, while all those who knew Mr. Scott seem to have had the highest admiration of his powers, each of them seemed unwilling, for some reason, to put any record of him in writing, and desirous to turn over the task to some one else. It is owing, therefore, to the backwardness of Mr. Scott's own friends, and not to any indifference on our part, that we have had to postpone for so long giving any account of his work. The following, from one of his old pupils, at last reached us, just too late for insertion in our last issue] :—

In the late George Gilbert Scott, the architectural profession has lost one who, though little heard of in recent years, was during the later sixties and seventies one of the leading men of what was then known as the New School; and who, though he never sought a wide practice, has left several notable buildings, which entitle him to a high position among those who have taken part in the architectural development of the closing part of the century. Mr. Scott was among those who were first attracted by the beauties of the later English Gothic and Early Renaissance styles, which had been neglected, and to some extent despised, during the rage after everything early and foreign.

One of Mr. Scott's earliest works, the restoration of the Hall and the Combination-room of Peter House, Cambridge, well illustrates his thorough knowledge of, and insight into, the manner and feeling which inspired our old builders, while at the same time possessing a freshness and originality which raise it out of the province of the more or less skilful copyist. The furniture and fittings were in this case fortunately left to the direction of the architect, and form a most pleasing and artistic whole, thoroughly in keeping with its place and purpose.

Mr. Scott carried out other work at Cambridge during the active years of his professional career. The restoration of the Hall at Christ College must be mentioned, together with the enlargement of the chapel at Pembroke, interesting as being the earliest recorded work of Sir Christopher Wren. There is also a new court at St. John's, Oxford, by Mr. Scott; and at Pembroke, Cambridge. Both these latter buildings are unusually fine specimens of their class.

In domestic architecture Mr. Scott's most important work was Garboldisham Hall, Norfolk, a well-designed building in the later Jacobean style peculiar to the district. One of his most characteristic works of this class was the vicarage house at Milverton, not to mention a number of less important buildings, all showing the same thoughtful and vigorous style.

Mr. Scott's name, however, will be chiefly remembered by his ecclesiastical work. A considerable number of old churches in different parts of the country have been restored by him with the same skilful care; and, at the time when they were mostly done, contrasted strongly, in their conservative spirit, with the too common methods of so-called restoration. The writer well remembers the impression made on him by the first of Mr. Scott's works of this kind which he saw—the church at Nunburnholme, Yorkshire. Instead of the usual sweeping away of everything interesting, and the bungled copying of the old work, which, as a rule, made Yorkshire restorations a byword twenty-five years ago, the old church remained strong and serviceable, and with its history unimpaired, and with such new work as it was necessary to introduce designed and executed in thorough harmony with the old.

Of new churches by Mr. Scott, probably the best known is the stately fabric of St. Agnes, Kensington. The church at Milverton is another characteristic example of his work, as is also All Hallows, Southwark. The completion of the transepts and choir of the Cathedral of Saint John's, Newfoundland, was carried out from Mr. Scott's designs, after the death of his father, Sir Gilbert Scott. Mr. Scott's large s ecclesiastical work is the still unfinished Roman Catholic Church at Norwich. This church Mr. Scott designed in the thirteenth-century style of English Gothic, instead of taking his inspiration from the later works of the fourteenth and fifteenth centuries, as had been his previous general practice. In its present unfinished state, it is hardly possible to judge fairly of the exterior of this fine building, but the interior of the nave is certainly one of the best specimens of modern English architecture.

In 1884 Mr. Scott published his "History of English Church Architecture," a volume of much research and information. He was also the author of several papers chiefly bearing on architectural subjects. He also took an active interest in the improved production of stained glass and of textile fabrics for ecclesiastical and domestic purposes.

Mr. Scott was a distinguished member of the University of Cambridge. He was the successful competitor for the Burney Prize, first in the Moral Science Tripos of his year, and was, in consequence, elected Fellow of Jesus College.

ARCHÆOLOGICAL SOCIETIES.

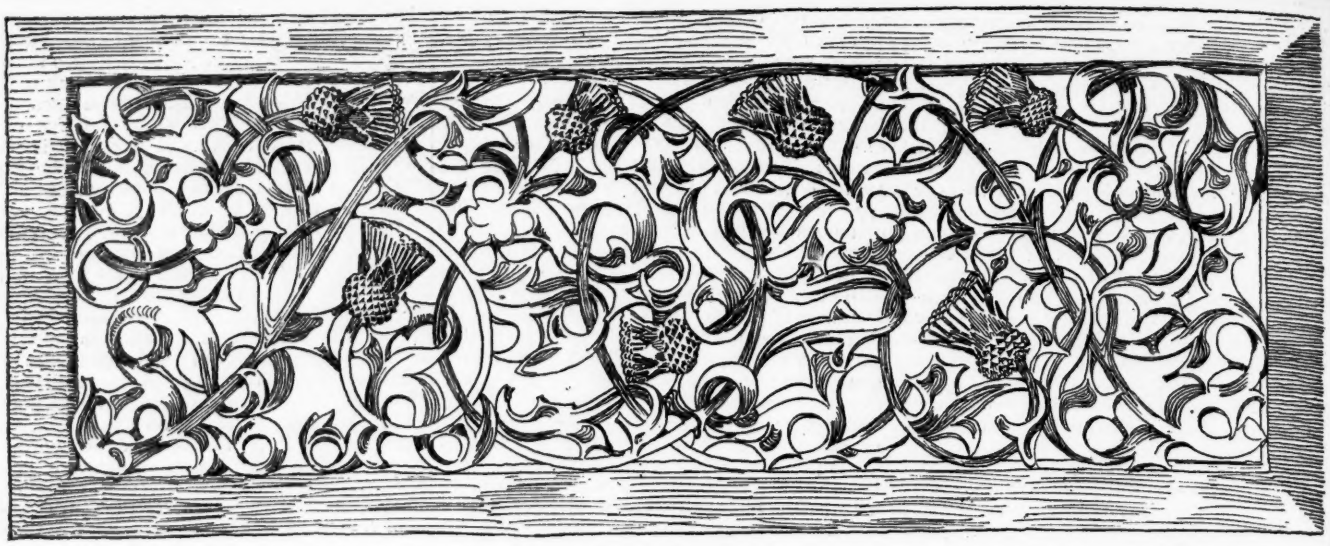
ARCHÆOLOGICAL INSTITUTE.—At the general meeting, on the 2nd inst., of this Institute, Judge Baylis, V.P., in the chair, Mr. H. W. Seton-Karr exhibited a large series of flint implements from the lost flint-mines of Egypt discovered by him in November last in the Eastern desert, between ten and thirty miles from the Nile, in the Wady el Sheik district. Many of the implements, he said, are new to science. The mines resemble ruined cities, and have a central work-place where most of the objects were found. They consist of flint ornaments, truncheon-shaped implements, clubs, axes, javelin-points, sickles, and variously-shaped knives. He also exhibited flint implements found during the last expedition to East Africa. Mr. Seton-Karr discovered a long, low hill in a plain, which may have been a palæolithic city, judging by the thousands of large weapons he found in a perfect condition. It is situated near Jalelo, about one hundred miles from Berbera. This is the first instance of such a discovery, and the first time prehistoric implements have been found in tropical Africa, and may throw much light on the question of the original home of the human race. A paper by Lord Dillon, President, and Mr. W. H. St. John Hope was read on the contents of an inventory of cloths of arras and other tapestries, beds, vestments, and books for the chapel, silver vessels, &c., books, garments, arms, and armour belonging to Thomas of Woodstock, Duke of Gloucester, K.G., and seized in his Castle of Pleshy, in Essex, December 13, 21 Richard II. (1397), with their values as shown in the accounts of the Escheator for the counties of Essex and Herts. Mr. J. Hilton then read a paper on the Coronation stone at Westminster Abbey giving an outline of the story attached to it, as related by Holinshed in his chronicles *circa* 1577, and gathered by him out of earlier Scottish legends and records which say that the stone came from Palestine to Egypt, and was carried to Egypt, Ireland, and Iona. The particulars, as related, gained implicit belief in Scotland, involving as they did a prophetic Latin couplet, that the Scottish reign should follow the destination of the stone. The paper then recited the views of modern investigators and critics, showing that the early story is fabulous down to the time when a certain stone found its way to Dunstaffnage Castle, in Argyllshire, where, for a considerable period it was used as the seat of the Scottish kings, who were crowned there. The stone was conveyed for similar use and better preservation to Scone in Perthshire, by King Kenneth, *circa* 834 A.D., and as it is said the prophetic verses were, by his order, engraven upon it. In the year 1296 Edward I., King of England, removed the stone to Westminster. The inscription is quoted in a chronicle written as early as 1389, or nearly two centuries before the birth of James VI., in whom is claimed the fulfilment of the prophecy, and since his time, and probably much earlier, sovereigns of England have been crowned when seated on it. Geological evidence shows that the stone is of Scottish origin. The paper brought together for the first time all that appears in scattered sources for or against the story, whether of fable, legend, or fact. A very curious light is thrown on the prophetic character of the Latin couplet, by a tract in the British Museum Library, dated 1681, wherein the words are printed as a chronogram, involving the mundane date of the birth of James VI., the first of the Scottish race to reign over England, a document hitherto unnoticed by the writers on the subject of the Coronation stone. Mr. Hilton put it on record for whatever it may he worth. It certainly is not a prediction written after the event. The paper concluded with remarks on the present condition of the Coronation chair.

BRITISH ARCHÆOLOGICAL ASSOCIATION.—On the 2nd inst. an interesting ceremony took place at the last Council meeting of this Association for the session 1896-97, the occasion being the presentation to Dr. W. de Gray Birch of an address and testimonial from some of the members and friends on his retirement from the post of Honorary Secretary and Editor of the Journal of the Association. The Marquis of Bute, V.P., occupied the chair, and after a few words expressive of his interest in the science of archæology, and of his long friendship with and appreciation of Dr. Birch, handed him the gift, which consisted of a handsome gold demi-hunter watch. Dr. Birch suitably replied. It may be interesting to mention that Dr. Birch has worked with the British Archæological Association for upwards of twenty-two years, being a most indefatigable Honorary Secretary and an untiring Editor of the Journal, which may be said to comprise in the twenty-two volumes which mark his period of service notices of all that has, in a prominent form, transpired in archæology. At the evening meeting—Mr. Thos. Blashill, hon. treasurer, in the chair—a large collection of rare and beautiful miniatures was exhibited by Mr. B. Nathan, many of which are of historical interest. Amongst the more prominent were a miniature of Lady William Russell, by Englehart; a miniature of Lady Penelope Fitzgerald, by Plomer; a miniature of Marie Louise, Princess of Orange; a box, with enamel of the marriage of Marie Antoinette with the Dauphin, afterwards Louis XVI.; a circular miniature by Grerge; a large miniature of Madame Vestris, by Plimer; a Limoges enamel of the Virgin and Child, from the Bohn Collection. In all, there were some thirty-six exhibits. A paper was read by Mr. Patrick, hon. secretary, in the absence of the author, Mr. T. Cann Hughes, entitled "Notes from North Lancashire," in which the ancient charters of Lancaster and the Borough seals were described. The earliest existent document is that of John, Earl of Moreton, dated 1193. The mayor's seal of the Borough is believed to be of the reign of Henry IV. or V., and bears in its centre three towers, each triple turretted, with a lion *passant gardant*, crowned, and a fleur de lis. The ancient stocks of the town are preserved at the Town Clerk's office, together with a series of ale and spirit measures, said to have been made from guns captured from the Spanish Armada. There are very many ancient door-heads in and about Lancaster, some of them having curious designs of fish and other emblems. The Rev. H. J. Dukinfield Astley, M.A., the newly appointed hon. sec. and editor, was introduced to the meeting and commenced his duties.

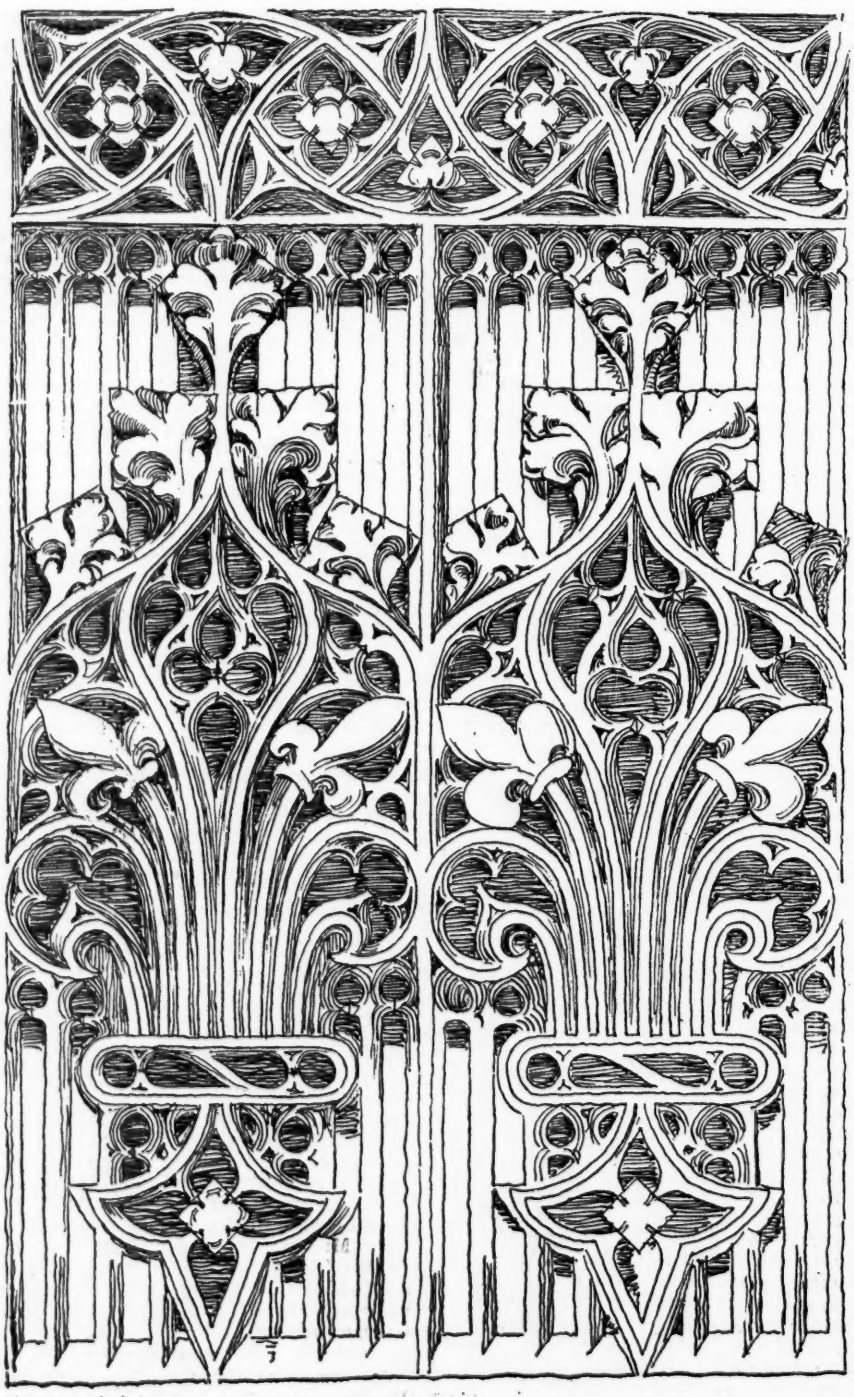
ARCHITECTURAL SOCIETIES.

GLASGOW ARCHITECTURAL ASSOCIATION.—The annual business meeting of this Association was held in the rooms, 187, Pitt-street, on the 1st inst., Mr. Wm. Tait Conner, President, in the chair. The Secretary's and Treasurer's reports were read and unanimously approved. The following gentlemen were elected office-bearers for the ensuing session:—Mr. Jas. A. Morris, Hon. President; Mr. Wm. Tait Conner, Hon. President; Mr. John Fairweather and Mr. George S. Hill, Vice-Presidents; Mr. Charles E. Whitelaw and Mr. James Salmon, Hon. Joint-Secretaries; Mr. Robert J. Walker, Hon. Treasurer; Mr. Hugh Dale, Hon. Librarian; General Committee, Mr. John Arthur, Mr. Walter Tucker, Mr. Alex. Wingate, and Mr. Alex. M'Gibbon. The travelling studentship prize for 1896-97 was awarded to Mr. Geo. Edward Walker.

RESTORATION OF PRIMITIVE METHODIST CHURCH, WATTON, NORFOLK.—This building has just been reopened after restoration. Mr. A. F. Scott, of Norwich, was the architect for the work, which was carried out by Messrs. Adcock & Sons. Both the church and schoolroom adjoining have been fitted with hot-water apparatus by Messrs. Reeve & Sons, of Norwich.



ONE OF A COLLECTION OF ENGLISH AND FLEMISH PANELS OF THE 15TH AND 16TH CENTURIES.



PANEL FROM A CHEST. FRENCH. END OF THE 14TH CENTURY.

CARVED PANELS FROM SOUTH KENSINGTON MUSEUM.

THESE two panels are respectively good examples of the rather stiff and symmetrical decorative panel carving of fourteenth century Gothic, and of the free style of late Gothic Flemish carving. The long-tongued leaves of the Flemish example show a kind of form frequently found in late Flemish and German work, and which is effective as giving occasion for a great deal of freedom and flow of line in the design. In the main curves of the stems we see almost the beginning of the Renaissance feeling, though this is contradicted by the little incident of the naturalistic butt-end of the scroll.

THE INCORPORATED ASSOCIATION OF MUNICIPAL AND COUNTY ENGINEERS.

A HOME Counties District Meeting of this Association was held on Saturday last week, at Eastbourne.

The members met at the Town Hall, where brakes were taken and the party visited the Flood Prevention Works, the Destructor and the Shone Ejector Station.

The members subsequently returned to the Town Hall, to luncheon, which was provided by the Mayor of Eastbourne, after which a meeting, presided over by the President, Mr. F. J. C. May, of Brighton, was held, amongst those present being Messrs. C. H. Cooper, Wimbledon; Fowler, Manchester; Pritchard, Birmingham; J. P. Barber, Islington; T. Walker, Croydon; W. H. Savage, East Ham; Dodd, Wandsworth; Thomas, Buckingham; C. J. Lawson, Southgate; J. P. Norrington, Lambeth; Mason, St. Martin's-in-the-Fields; T. H. Yabbicom, Bristol; W. Weaver, Kensington; Laffan, Twickenham; and others.

A paper by Mr. R. M. Gloyne, the Borough Engineer, and entitled, "Construction of the Most Recent Flood Prevention Works in Eastbourne" was, for want of time, taken as read.

Mr. Gloyne, in the course of his paper, stated that the works had been designed and are being executed for the purpose of obviating, in the future, the periodical flooding to which the town has, in parts, been subject in the past in times of heavy or continuous rainfall. The cause of this flooding was undoubtedly the extremely rapid development of the high, and the flat level of the low-lying portions of the borough. In 1891 two surface-water schemes were adopted, one for the western or high-lying portion, and one for the eastern or low-lying portion of the borough, the combined cost of these being some 15,000*l*., and in addition a sum of nearly 6,000*l*. for further plant required at the Ejector station. The author commenced his duties at Eastbourne in 1893, and the first experience he had of flooding was some three months afterwards, when Terminus-road was nearly 9 in. deep in water. It had been expected that when the construction of the 1891 schemes was finished, complete immunity from flooding would be obtained, and on being confronted with a repetition of the former evils,

the Council resolved to obtain the highest expert advice. They consequently called in Mr. Henry Law, M.Inst.C.E., of Westminster, and, acting upon his report and advice, they resolved to carry out the scheme he designed, and without any contractor, and under the author's immediate control. The total cost of the works is estimated at 85,000*l*., of which some 76,000*l*. is now being spent, leaving the balance for a purely surface-water scheme to be carried out afterwards. The work now in hand consists broadly of the abandonment of the two existing 3 ft. diameter brick sewers across the Crumbles, and the substitution of two lines of 4 ft. 6 in. diameter cast-iron pipes with turned and bored joints; an entirely new high-level sewer 4 ft. 6 in. diameter, constructed of 4 ft. 6 in. cast-iron pipes through the water-logged beach, and of concrete and iron pipes 4 ft. 6 in. internal diameter through the town, and the displacement of a portion of the existing 3 ft. diameter brick high-level sewer by cast-iron pipes 4 ft. 9⅝ in. diameter with turned and bored joints. The author then dealt with the subject under the following heads:—(*a*) Depôt arrangements; (*b*) Outfall at Langney Point; (*c*) Valve chamber at Langney Point; (*d*) Three parallel lines of cast-iron pipes 4 ft. 6 in. in diameter laid across the Crumbles in the same trench; (*e*) Concrete sewer 4 ft. 6 in. in diameter; (*f*) 4 ft. 6 in. and 4 ft. 9⅝ in. diameter cast-iron pipes laid in Terminus-road; (*g*) Regulating chamber. The author fixed upon a site for a depôt immediately adjoining a beach road leading from the main road to Pevensey, to Langney Fort, and adjacent to a single railway line upon which trains of wagons are run to and from ballast holes on the Crumbles.

The outfall proper consists of three parallel lines of 4 ft. 6 in. cast-iron pipes, 12 ft. working length, 1¼ in. metal, with turned and bored joints, the sockets being 5⅜ in. deep, and the band on the spigot ends of nearly corresponding width. These pipes run 260 ft. into the sea, and each line terminates with a horizontal bend to throw the flow of sewage eastward. To place these lines of pipes in position a pier of whole timber piles was constructed seaward. These piles were spaced longitudinally 12 ft. between centres, and transversely 18 ft. 6 in. from centre to centre, each pair being braced across at the top with half-timbers bolted through the main piles by 1¼ in. bolts. Each alternate pair of piles was cross-braced with half-timbers similarly secured to the main piles and to one another. The piles were connected longitudinally by whole timber runners with butt joints, these latter being secured by 3 in. wooden fish plates and 1¼ in. bolts. The runners were securely dogged to the piles and bolted through the horizontal braces. Upon them were spiked railway metals, upon which the gantry spanning the trench and carrying the pipes to their proper position was worked. This gantry was framed of 12 in. by 12 in. and 12 in. by 6 in. timbers, and upon the top cross-pieces were spiked metals carrying a travelling jenny, upon which were secured two crabs, each capable of lifting 3 tons direct from the drum. Both traveller and gantry were worked by toothed gear from one side, and as the former ran at right angles to the latter, any spot in the trench was commanded. Sheet piling 12 in. by 6 in. was put in between the main piles for 16 bays shoreward, and also across the ends of the pier, and from the space so enclosed the sand, &c., where necessary, was excavated to its proper level, and concrete in bags substituted by a diver. Upon the concrete so placed the pipes were laid, being carried out by the gantry. The seaward end of the outfall for a distance of about 150 ft. inland is incased in concrete 2 ft. thick at the top, and practically forms a low concrete groyne, through which run 3 parallel pipes, 4 ft. by 6 in. diameter. For 215 ft. from the sea end the inclination is 1 in 40, and then to cross under the existing high-level and partially through the existing low-level sewer, the remainder is dead level, the difficulty of working in turned and bored joints to two different gradients being surmounted by using a make-up length of concrete. The high-level brick sewer was some distance above the new outfall, and being in rather a dilapidated condition, great care was necessary to prevent its bursting and flooding the trench. The shingle surrounding it was excavated across the trench in sections, and each end so exposed was close lagged all round the outside of the brickwork, the laggings being encircled by wrought-iron bands secured by bolts and nuts, and tightly wedged up. As each section was finished so far, it was slung up to 16 in. square baulks stretching across the trench, the chains being wedged up as tightly as possible. On completion of the pipe line underneath, a stiff timber was laid across on the pipes, and another placed immediately over it underneath the brick sewer, and secured in position by puncheons. The low-level sewer had to be cut into to allow the new work to be put in. Each line of pipes had to be treated separately, and the old brickwork made good before the next was touched.

The valve chamber is of concrete, 29 ft. internal diameter at the bottom, and 28 ft. at the top. The circular walls are 3 ft. thick, although where the pipes had to pierce them they were originally constructed 18 in. thick, the difference being made up after the pipes had been fixed. This structure was built up on the beach on a cast-iron curb, 35 ft. diameter outside, composed of twenty-four segments accurately fitting together, and afterwards sunk into position by excavating from inside. The author believes this is the first instance of a *concrete* cylinder being so treated. The cast-iron curb was first set level on polling boards in the beach, and bolted up in segments, the outside and inside soldiers were then erected and bolted together at the top in pairs, and also connected round the circumference of the chamber. Shutters, 3 ft. deep, of 2-in. stuff nailed to ledges cut to the proper radius were worked in between the soldiers, the cavity so made being filled in with 6 to 1 concrete. The shutters were 6 ft. 4 in. long for the outside, and 5 ft. 2 in. for the inside of the work. As each layer of concrete became set, the shutters were moved up, being kept in their new position by upright struts placed underneath. The face of each shutter, when altered, was brushed over with a composition called "concrete composition," which effectually prevented any sticking or adhesion between the timber and the concrete. In each layer of concrete a V-shaped groove was formed on the top surface to act as a key for the succeeding one. In this manner the walls were carried up almost to their full height when a regrettable accident occurred, resulting in the partial collapse of the chamber. The action of spring tides aided by south-west winds undermined the curb on which the structure was built, the result being that two sections broke, and portions of the concrete walls came down, leaving other portions standing, although very badly cracked, and others quite intact. About one-half the chamber was involved. The cracked portions of concrete were thrown down, and together with those already on the ground, were placed in a position to act as a breakwater. Fortunately, there was nothing straight about the broken faces of the perfect portion, and by taking advantage of this, jumping holes in the yard-wide faces, letting in curved iron bands, careful washing, ramming the new concrete into every nook and cranny, and grouting each layer thoroughly in at the joints, a most successful mend was made. When the reconstruction had been effected and the new work carried up to its height, the chamber much resembled a Martello tower without its roof. Three weeks were allowed to elapse before a commencement was made with lowering by internal excavation, of which the first thing to be done was to remove the boards upon which the curb rested. These were taken out bay by bay on opposite sides of the chamber, so that when all had been removed, the whole weight of the walls rested on the cutting edge of the curb. Square timbers were thrown across the top, and partially cemented in to secure them. From each of these depended two stages hung to iron rods hooked over the timbers, and these, together with another on trestles on the beach, gave sufficient lift to throw the material out. By continually excavating the shingle from inside and throwing out by the means just described, the chamber gradually settled down to its proper level by its own weight, and as the walls were tapered one foot in the total height to skewback level no difficulty was experienced as regards earth binding. When the structure had been sunk low enough, the bottom had to be put in. The level of this is 18½ ft. below H.W.O.S.T., and precautions had, of course, to be taken to prevent the sea damaging the newly laid concrete. This work was commenced by excavating the shingle under the cast-iron curb to its full depth below the 18-in. horizontal flange, and substituting sugar-bags filled with dry concrete material, bay by bay, working alternately on opposite sides of the chamber. This being tidal work, the inflowing water caused the cement and beach to set in the bags, and proper care was taken not to disturb the beach in the bays adjoining the one which had been last dealt with, until the author was satisfied that the concrete material was sufficiently compact and hard. To facilitate the operation of excavating, a No. 9 pulsometer pump, driven by a 20 horse-power portable boiler, was slung inside the chamber, and the suction-pipe carried down below the bottom of the floor. Towards the sump formed to receive this pipe ran drains of stoneware pipes, roughly laid down and not jointed, into which other drains formed with large boulders, &c., delivered the water from all round the circumference of the chamber. When the curb had been packed and underpinned with concrete all round, the floor, 2 ft. thick, was put in in sections and in two layers. The necessary withdrawal of the pump rendered it requisite to deal last with this particular portion, and sufficient time was allowed to elapse beforehand to preclude the possibility of the tide blowing up the floor when its free ingress through the sump hole was stopped. In anticipation of this closing, an iron cyclinder with circular flange at the top was cast, of sufficient diameter to contain the suction pipe as well as a thickness of concrete, and placed in position. A cover plate, with bolts, nuts, &c., was also provided, to slip on to the flange of the cylinder and bolt down to it, and one long tide, the pump and suction were withdrawn, the sump plugged with concrete, the cover plate bolted down and weighted with 12 in. of concrete put into the proper floor level, this concrete being itself burdened with railway metal and other material, to keep it in its place. Complete success resulted from these endeavours, and no blowing or unsoundness has been observed in any part of the floor. Some weeks afterwards the dome was put on. The ribs for this were carried on a single upright in the middle of the chamber, and on soldiers placed at intervals round the interior and strutted from the central pillar. The necessary laggings having been cut and shaped, were nailed on forming a complete centre for the concrete. This is 2 ft. thick at the crown, and 3 ft. at the skewback. Access to the interior of the chamber is obtained through a manhole at the top, to the frame of which is affixed an iron ladder stayed to the walls inside by wrought-iron rods.

The trench for 4 ft. 6 in. cast-iron pipes was commenced right away from the chamber for a certain depth, and then a dumpling left beyond which the excavation proceeded to its full depth. The author then described the timbering, and the objects of the three lines of pipes.

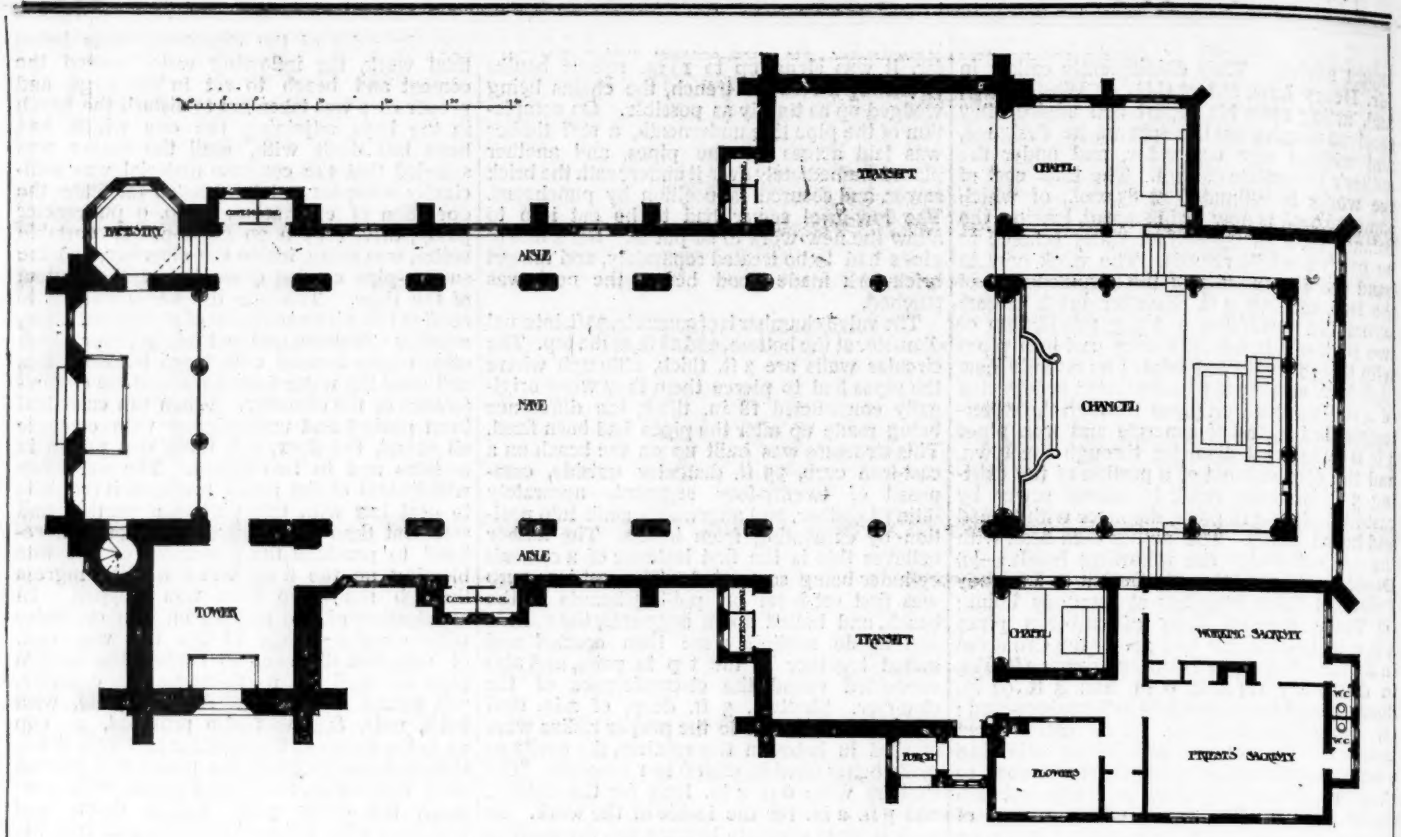
The concrete sewer was commenced near its future junction with the pipes, enough space being left for a making-up piece, and was speedily carried through Latimer-road as far as St. Aubyn's-road. The ground was all of beach, rendering close timbering with runners necessary, but some compensation was obtained in that the excavated material was for a considerable length suitable for concrete work. The author then detailed the method of construction. The whole of the concrete was mixed in the proportions of 4½ of beach and 1½ of sand to 1 of cement. The manholes were formed in concrete, and are 4 ft. 6 in. diameter, with walls 12 in. thick. A wrought-iron ladder is fixed in each one, and for covering-in, 7-in. York landings are used with manhole frame and cover.

The cast-iron sewer, Terminus-road, and regulating apparatus, consists of cast-iron pipes, similar in all respects to those being laid in across the Crumbles, except that one portion is larger in diameter to the extent of 3⅛ in. The method of working was also similar to that now in use on the Crumbles.

The President then invited discussion upon the paper.

Mr. Walker, in proposing a vote of thanks to Mr. Gloyne, said he was in favour of clay ballast for making concrete. Some care was necessary in making the concrete, but he had obtained some excellent results with clay ballast.

Mr. Pritchard, past President, seconded the vote of thanks, and said, in reference to administrative work as against work carried out by contractors, if administrative work could be carried out by the London County Council, or any other public body, as well as the work they



St. Alban's, Blackburn. Plan.

were considering, there would be no occasion for fault-finding.

Mr. Fowler, past President, asked what the height was of the pipes above ordnance datum. In regard to Shone's system, it gave him pleasure to see that day the work which Mr. Shone had carried out. The system was adopted more now than it used to be, but even now it was not known all that Shone's ejector could do. He was adopting the system in several places.

Mr. Barber referred to the construction of the valve chamber, and said that too often irresponsible critics were able to interfere in the work of competent men. He was much struck with the timbering of the trench, which was an excellent piece of work.

Mr. Mason asked why a grab was not used in the excavation, and whether it was possible to know how the cost of the work would compare with contractors' work.

Mr. Laffan asked why there were three separate sewers instead of one equal to the capacity of the three?

The President then put the vote of thanks, which was cordially agreed to.

Mr. Gloyne, in reply, said that he did not intend to touch upon the vexed question of contractors' work *versus* that carried out by administration, though he might say that when the work at Eastbourne was completed, the cost would probably be on the right side. A grab had been tried, but it did not answer because of the large boulders met with during the excavation. As to why three separate sewers were used instead of one, two of the sewers were to replace existing high- and low-level brick sewers, and the other was a prolongation of the new concrete sewer which had been carried out through the town. At Manchester he had had much experience with ballast as concrete, and at Davyhulme, in the tanks where it was used, it had answered admirably.

On the motion of Mr. Mann, seconded by Mr. Fowler, a vote of thanks was accorded to the Mayor and Corporation of Eastbourne for the facilities given to the members during the visit.

The members then proceeded to the seawall works now in course of construction at Splash Point, where they were received by Mr. T. Wilkinson, the contractor for the works.

BAPTIST CHURCH, HEATON.—A new Baptist church has been erected in the Heaton-road, from plans prepared by Alderman W. H. Dunn, of Gateshead. The contract was let to Mr. W. A. Laws, of Heaton. The new church, which is built in red brick with stone facings and mouldings, will seat 750 persons, and will cost 3,435*l.*

Illustrations.

DESIGN FOR THE NEW BELFAST MUNICIPAL BUILDINGS.

THE illustrations show the perspective view, elevations, plan and section of the design by Messrs. Thomas & Son, of London, which has just been selected in the competition for new municipal buildings for Belfast.

The building will abut (at the south) on the road forming the south side of Donegal-square, and the business entrance to the building will be through the drive from that road.

The principal front faces the principal street of Belfast, which runs northward from the centre of the road forming the north side of the square. The principal feature of this façade is designed within the limit of view obtained from any point in the principal street, which extends for a considerable distance from the square.

The site is at present a public garden, and as far as possible this is to be retained. The building permits the retention of most of the trees on the site.

By the adoption of a drive from the back the point of approach to the building is centralised under the dome, whether approached from the front or the back.

The "Rates" and "Gas" departments are directly accessible from the street, without traversing the rest of the building.

The general arrangement of the principal rooms is the outcome of a desire that they should form a suite of reception rooms for municipal functions, and at the same time permit the great hall and refreshment room being shut off and let for public purposes.

In carrying out the building we may suggest one small alteration which may be made with advantage; the wall of the corridor where the ladies' and gentlemen's retiring-rooms are shown, on each side of the octagonal entrance hall, should be set back so as to leave a small vestibule in front of these rooms. To open lavatories with only a single door straight out of the corridor, in the way proposed in the plan as shown here, is rather an uncivilised kind of planning.

ST. ALBAN'S, BLACKBURN.

WE give the interior and exterior perspective views and a plan of this church, which is being erected at Blackburn from the design of Mr. E. Goldie, and is to seat 1,000 persons. It is to be built of local stone, and roofed with Westmoreland slates.

The church, as will be seen, is planned on the modern system of reducing the side aisles only to narrow passages for access, and the plain and massive manner in which the arcade is treated renders it architecturally a kind of basement on which the more decorative portion of the composition rests. The effect is good, though the piers are rather large as a matter of convenience in arranging and getting at the seats.

The flooring under the seats is to be wood block, the aisles tiled, and the chancel and side chapels laid with mosaic. The roof internally is a plain barrel vault of wood divided into bays by stone arches; the chancel and side aisles are to have wood groining.

It is proposed to spend 20,000*l.* on the church and sacristies, exclusive of tower and fittings. The lighting is to be by electric light. It is proposed at some future time to make a special feature of the high altar and reredos, which will practically fill up the whole of the east end; the high altar being made more prominent by being raised some 4 ft. 6in. above the nave floor level.

The church will stand in a prominent position, being free of buildings on all sides, and having a large open space in front.

The interior perspective is at present exhibited at the Royal Academy.

MAGAZINES AND REVIEWS.*

THE bulk of the June number of the *Art Journal* is occupied with an illustrated review of the Royal Academy Exhibition, by Mr. A. C. R. Carter; a well-written and judicious piece of criticism. There is also an article on the New Gallery Exhibition, and a continuation of the series of articles on "The Royal Academy in the Present Century," dealing this month with the works of James Ward and Henry Bone, the latter a name little remembered now; he was a painter on porcelain and enamel. The principal plates are illustrations of Mr. Gregory's "Boulter's Lock" and Mr. Waterhouse's "Hylas and the Nymphs," from the Royal Academy Exhibition.

The *Magazine of Art* has also its article on the Royal Academy. The writer considers there are five works supreme in the present exhibition, Mr. Abbey's scene from Hamlet being one of them—a ruling in which we cannot concur. The most interesting article is a

* The object of these notes is to point out anything in the contents of the current magazines which is of special interest to our readers, with occasional brief criticisms on the views expressed in such articles. When a magazine which has been sent to us is not noticed, it is because that number contains nothing that it is within our province to comment upon.

survey of the work of Mr. Reynolds-Stephens' the collection of illustrations showing that he is an unusually all-round artist, succeeding as well in decorative work as in painting. His charming design for a silver bonbonnière, in the sculpture-room, we have already noticed.

In the *Architectural Record* Professor Goodyear continues his series of articles in which he is endeavouring to prove that all the faulty setting out in various Renaissance buildings is due to intention and a system. The argument appears to us to get more preposterous as it goes on. Mr. Barr Ferree contributes Part X. of his valuable series on "French Cathedrals." Mr. J. Beverley Robinson contributes an article on "Modern Vault Construction," meaning thereby the construction of vaulted strong-rooms. The works of Messrs. Cady, Berg & See, the well-known firm of American architects, are the subject of an article by Mr. Montgomery Schuyler. The most original work of theirs illustrated is the Jarvis Hall of Science, with its round towers at the angles; a building aptly expressing in its severe style of treatment the practical purpose for which it was erected.

The *National Review* includes an article by Mr. H. H. Statham on "London as a Jubilee City," a review of the architectural merits and defects of London, and its want of the qualities of space and stateliness which should distinguish a capital city. Mr. D. S. MacColl contributes a short article on the Royal Academy, not dealing with individual pictures, but with the spirit and management of the Academy generally, and in a very severe tone, though we do not know that there is anything said that is not true enough. We cordially concur in the strong comment on the attitude of the Academy towards the late Alfred Hunt. The writer suggests that some of the injustices and very extraordinary refusals of work by men of real talent which occur perhaps every year, are the result not of jealousy or ill-feeling but of "sheer over-worked incapability of dealing with the mass of claimants." This is a charitable view which is perhaps more true than would be generally suspected.

The *Century* devotes an article to an important sculpture memorial which we were not acquainted with, a military memorial to Colonel Shaw, who was killed in the American War. The composition is a remarkable one, a bas-relief showing the officer on horseback among his troops, as if walking past the archway formed by the frame of the sculpture. The rest of the article is occupied by some account of the works of the sculptor, Mr. St. Gaudens, who appears to be an artist of no ordinary gifts and versatility. Readers will remember his portrait bas-relief of Stevenson the novelist, exhibited in London a year or two ago. Some of his designs for monumental and architectural sculptured figures are strikingly original. The same number contains an article on "A great modern observatory," that at Harvard.

Under the heading the "Field of Art" *Scribner* gives some pithy remarks on the influence of tradition in architecture, winding up with the conclusion, in which we entirely concur, that "since the beginning of the world no man has ever designed a good building independently of tradition." The same number contains a description and a good many illustrations of the new Library of Congress, of which we may have more to say.

The *Fortnightly* contains an article by Mr. H. H. Statham on "The Paris Salons."

Knowledge contains an article by Mr. R. G. Blaine, M.Inst.C.E., on Progress in Mechanical Science during the Queen's reign. Professor Lobley's series of articles on "The Age of Mountains," with sections of strata, is continued.

The *Cornhill* contains an article on "St. Paul's," chiefly on the monuments. The writer's artistic and architectural perceptions may be judged of from the fact that he waxes eloquent over "the superb reredos which seems really to have transformed the character of the whole interior of the building." It has indeed! That kind of remark is a typical example of the perception of the general English public on matters of this kind.

The *English Illustrated* contains an article on the Ben Nevis Observatory and the work done there.

The *Pall Mall Magazine* contains an illustrated article on Lyme Hall, the celebrated house of "The Leghs of Lyme," in Cheshire; and one on "Hyde Park in Days gone by," with reproductions of some old engravings of the place and its former habitués.

Shop Door, Bristol.

SHOP DOOR, BRISTOL.

THIS is an illustration of a decoratively treated door in a new shop front in Bristol (at the bend in the street below College Green), of which Mr. Milverton Drake is the architect.

The plinth and base to the pedestals are in Labrador granite; the pedestals and lower portion of the piers are granite, with bronze bands dividing the granite from the upper portion in red Mansfield stone. The fascia plates are of solid bronze with aluminium letters.

Correspondence.

To the Editor of THE BUILDER.

R.I.B.A. ELECTIONS.

SIR,—Kindly allow me to remind members of the R.I.B.A. that the adjourned discussion on the election of Fellows follows the ordinary business on Monday next, and that it is most desirable that all those taking exception to any of the proposals should attend.

H. V. LANCHESTER,
Hon. Sec. Associates' Committee.

WATER-CLOSET PLUMBING.

SIR,—In my previous letter I omitted to mention that in quite numerous cases the air cock of a valve closet is so badly adjusted that the water of the basin never reaches the overflow. In these cases the overflow is either trapped with "slops" or not trapped at all.

NORMAN WIGHT.

The Student's Column.

SPECIFICATIONS.—XXIV.

ALTERATIONS.

IN specifying work that has to be done to carry out alterations, it is a great mistake to attempt to divide the work strictly into the several trades as is ordinarily done in specifying for new work. It is far better to specify the whole work connected with any particular piece of alteration, dealing with the work in all trades.

As it frequently happens in carrying out alterations that part of the premises only can be given up to the builder at one time, it is important to express clearly to what extent and at what times the builder will be allowed to have access to the different parts of the premises. There will, therefore, generally have to be some special clause defining the *modus operandi*, thus:—

Contractors are to commence with the additions to the existing buildings shown on the plans. These are to be completely finished, and possession of the same given up by the day of . The existing building consists of three distinct blocks, the work in each of which is to be carried out and completed before the contractors can be allowed to enter upon the others. Commencing with the building nearest the street the blocks are designated as follows:—Front block, central block, and rear block. The contractors will be allowed to commence work in the front block one week after giving up possession of the new additions. The works in the front block are then to be entirely completed, and possession of the same given up by the day of . In a similar manner the contractors will be allowed to enter upon the central block one week after possession has been given up of the front block. The works

of the central block are to be completed by the day of , and the contractor will be allowed to enter upon the rear block one week after possession has been given up of the central block.

The contractors are to provide, fix, and remove temporary efficient screens of canvas and paper to shut off parts of the buildings in which they are working from those in the occupation of the employer.

The names of rooms, &c., shown on plans are their new designation.

State whether the contractors are to be allowed to make use of water and gas, but stipulate that they are to pay for same, and arrange how the amount of payment is to be fixed. Specify if any temporary corridors or staircases or passage-ways are necessary, how these are to be arranged, and in what way they are to be formed. Also that the contractors are to remove same and make good any damage that may be caused.

The general description of quality of materials and workmanship should precede the detailed specification of the various works that are to be carried out in the various parts—of some typical items of which examples will now be given.

Front Block.

Basement.—Carefully take out and remove the present window of the heating chamber together with the arch and sill, and brick up opening with 18-in. brickwork in cement, properly bonded to old work, for which toothings are to be drawn, and pin up over same to old work. Fill up area outside old window opening with hard dry brick rubbish, finished with 6-in. bed of Portland cement concrete floated in cement to receive new tile floor above. Cut out opening for new window where shown on plan, &c. (Describe all the works connected with this new window opening in all trades).

Ground Floor.—Form opening in cross wall of new entrance hall 7 ft. by 9 ft. extreme. Make good jambs in brickwork in cement, and turn relieving arch over in three half brick rings in cement, angles roughly chamfered to receive new plaster moulded arch. Make good flooring through opening to match existing floor.

Form jambs of new opening in two-coat work in Keene's cement finished with rounded angles, and run in Keene's cement moulded arch 18 in. girth to detail. Make good plastering of existing walls to the new opening, and provide and fix short piece of skirting to each jamb to match, and properly mitred to the old skirting of rooms.

Remove the present staircase and make good the plastering and flooring. Cut away wall on each side of existing opening to form new opening 10 ft. wide and 9 ft. high; make good jambs in brickwork in cement. Insert a Bressummer formed of No. 3 9 in. by 3 in. deals bolted together with ¾ in. bolts to carry wall over, and resting on 3 in. tooled York template at each end. Fill in the opening thus formed with 2 in. framed, panelled, and moulded partitions, the upper part open and prepared for glass with mitred shifting beads fitted with brass caps and screws, and glazed with British polished plate glass about ¼ in. thick, bedded in flannel. Form door in same to match partition, hung with a pair of 4 in. wrought-iron butts, and fitted with 6 in. mortice locks, p.c. 7s. 6d., with brass furniture both sides. Make good all work disturbed around new opening.

Take down and remove the existing wall separating from . Shore up upper portion of wall, and insert rolled steel girder, weight lbs. per foot run, to be obtained from Messrs. , cost of which is included in the p.c. amount provided for iron work. Build in to receive ends of girder 3-in. tooled York templates, 14 in. by 9 in. Fix under middle of this girder cast-iron column, 6 in. diameter, ft. long, weighing lbs., which will also be supplied by Messrs. , and the price of which is also included in the provisional amount already referred to. Excavate for and form good and firm foundation for this column of 18-in. bed of Portland cement concrete, 3 ft. 6 in. by 3 ft. 6 in., as shown on plan, the bottom of same being 3 ft. below level of floor, and build on same 14-in. pier in blue Staffordshire bricks in cement, covered with 4-in. tooled York stone base to receive iron column, which is to be bedded on a sheet of 7-lb. lead. (Continue description of works connected with this alteration by describing the treatment to be adopted in casing or otherwise of the steel girder and column.)

Cellar.—In the formation of new cellar shown on plan the existing external wall of scullery is to be underpinned in the following manner. The whole of the footings and concrete under existing wall are to be removed, and the new wall of cellar is to be carried up as shown on section in 18 in. work in cement tightly pinned up to lowest course of existing wall with slates, tiles, or hard stone in cement. The concrete under the new wall is to be composed of five parts of ballast to two parts of sand, and one part cement by measure. This work is to be carried out in one yard lengths, alternate lengths throughout the length of wall to be first of all built, completed, and pinned up, and then followed by the remaining lengths which are to be toothed and bonded to those first built up. All brickwork in underpinning is to have buttered joints and to be fully flushed up at each course. (If there is damp ground on other side of the wall which is going to be underpinned it will, of course, be necessary to specify the precise method of guarding against this difficulty.)

Raising Roof of Shed.—Remove the roof of shed between scullery and boundary wall, take off coping and top course of wall, and raise same a height of 3 ft. 6 in., as shown on drawings, in brickwork in cement, and form zinc flat over shed, with 4½ in. by 2 in. rafters on 4 in. by 3 in. plates, and covered with inch rough boarding, with edges shot for zinc, and cover same with No. 15 gauge Vieille Montagne zinc, with 2½ in. drips and 2½ in. rolls where shown on plan. Put to this roof inch wrought and beaded fascia, and 4 in. ogee moulded cast-iron eaves gutter, and 3 in. rain-water pipe discharging into slipper shown on plan.

Removal of Sink and Drain.—Remove sink in present scullery, take out and remove the whole of the drain from same for its entire length under the existing building, sprinkle bottom and sides of trench of same with fresh burnt lime at the rate of one bushel to the yard. Ram bottom of trench and fill in with lime concrete up to, and make good, present cement floor of scullery. Search for junction of drain from this sink with main drain in yard, and cut off and disconnect the old drain from scullery sink. Clean out with brush the length of drain, disconnect and afterwards sweep through same a bushel of fresh lime and hermetically seal ends of this old drain with slates and cement. The water supplies to this scullery sink are to be diverted to supply new sink described among general works under "Plumber."

First Floor Water-closet.—Take down and remove the present pan closet together with seat and other fittings, disconnect and remove supply pipe to same and waste preventer of cistern. The connexion with main cistern to serve for supply to new water-closet, but with this exception the whole of the plumbing connected with the present water-closet is to be taken down and removed. Take out and remove present soil pipe and casing, also the drain for same running under present library, the trench of which is to be treated in a similar manner to that described for scullery sink. Take down and remove present dwarf partitions between water-closet and bath-room; take up the floor of present water-closet and relay with new 1¼-in. yellow deal tongued flooring. Make good plastering, skirting, and any other works disturbed. (Then proceed to specify the work of the new water-closet in the ordinary way.)

Cold Larder.—Excavate site of new cold larder to a depth of 2 ft. below corridor floor, and for trenches for foundations of new walls to the depth shown on drawings. The concrete of these foundations to be as described for new additions. Cut a chase 4½ in. wide, and 4½ in. deep in old wall, where new walls of cold larder join them. Carry up new wallsin good, hard stock bricks, the work generally to match adjoining work. The damp course to be as specified for new additions. The external walls of cold larder to be built where shown as cavity walls of two sections, the outer 4½ in., the inner 9 in. thick, with 2½ in. cavity, and the sections are to be bonded with wrought-iron wall ties, tarred and sanded before being used, and built in 3 ft. apart in every third course. The window opening to have gauged arch in red brick, and red brick on edge sill, set in cement, with double tile course under projecting 1½ in. from face of wall. Window opening to have 9 in. by 3 in. lintel, 4½ in. by 3 in. rebated, and twice chamfered, casement frame, with 5 in. by 4 in. sunk, weathered, and throated oak sill. The sashes to be 2-in. ovolo moulded casements, hung to open inwards, with a pair of 3-in. wrought iron butts, and fitted with strong malleable iron cockspur casement fastening and strong 18-in. malleable iron casement staybar fastening. Fix outside frame fine perforated zinc, No. 15 gauge, with the top edge turned outwards, about ½ in. from top. Floor of this larder to be formed with 6-in. square red tiles, laid and jointed in cement on bed of 6-in. concrete, and the necessary dry brick rubbish to bring up level of same. Cut and form opening for doorway to larder in 14-in. old wall, build in 3-in. lintel, with rough removing arch over, in two half brick rings in cement. Put solid door frame, 4½ in. by 4 in., rebated and twice rounded, with wrought iron dowel pins let into 3-in. tooled York stone, threshold 14 in. wide, back jointed to old and new floor. The door to be 1¾ in. 4-panel moulded and square door, hung with a pair of 4-in. wrought iron butts, and fitted with rim lock and brass furniture, p.c. . Form roof over cold larder with 6 in. by 6 in. timbers cut diagonally and laid as shown on section, as support for concrete roof composed of five parts of coke breeze to one part of Portland cement, and finished with Portland cement face neatly floated to current. Provide and fix 4½ in. ogee moulded cast iron eaves gutter, with 3 in. rain-water pipes, and connect with rain-water drain. Fit up round larder three tiers of 1 in. rubbed slate shelving, 12 in. wide, as shown on plan, with rounded edge and rounded angle next doorway. The shelving to be carried on No. 12 in. wrought iron brackets plugged to wall. Provide and screw into roof timbers No. 12 ½ in. screw hooks where directed. (Specify also method in which the walls and ceilings are to be plastered or otherwise treated.

The description of painting and decorative work can usually be included in the general specification unless they are specially varied.)

OBITUARY.

MR. T. P. MARTIN.—The death of Mr. T. P Martin, architect and surveyor, of Swansea, took place recently at Coleford, where he was on a visit. Mr. Martin was a native of Swansea. When the Corporation several years ago decided to put the control of the roads under a separate department Mr. Martin was elected road superintendent, and on resigning this position about seventeen years ago he commenced practice as an architect and surveyor.

GENERAL BUILDING NEWS.

EXTENSION OF PREMISES, NEWCASTLE. — The premises of Messrs. T. Pumphrey & Sons, of the Cloth Market, Newcastle, have been extended. The whole of the ground floor cafe has been appropriated to the use of smokers, and for the convenience of ladies and non-smokers a room on the first floor has been provided, access to which is gained by means of a staircase leading from the front shop. There is a ladies' cloak room in connexion with the upstairs' apartment, and the windows are filled with stained glass. Electric light is used throughout. Plumbing and heating arrangements have been carried out by Messrs. Henry Walker & Sons, and the decorations are by Mr. G. G. Laidler. The general contract work was carried out by Mr. Jackson, the whole of the alterations having been made from designs by Messrs. Oliver and Leeson, architects.

Y.M.C.A. BUILDINGS, READING. — The new Y.M.C.A. Buildings, in Friar-street, Reading, were opened recently by Sir George Williams. The buildings have been erected from the designs of Mr. F. W. Albury, architect, of Reading. The frontage to Friar-street is 28 ft., but the return frontage to Merchant's-place is 83 ft. The front portion of the building is five stories high, while the back part is of two stories. The whole site is basemented. The building contains a kitchen, bath and dressing rooms, lavatories, and a gymnasium, the latter being about 40 ft. by 24 ft. high, with a gallery all round. On the ground story is a restaurant, an entrance lobby and vestibule, and staircase hall on the level of the gallery of the gymnasium, with a second entrance from Merchant's-place. There is a separate entrance to the gymnasium. On the first floor is a lecture hall, with seating accommodation for about 200. There are also a reading room, and a secretary's office on the first floor. The second story consists of rooms available for classes or games and a parlour. The upper floor is appropriated to the resident caretaker. Mr. Fidler was assisted in the erection of the building by his foreman, Mr. Blackwell, who generally superintended the works. The brickwork was executed by Mr. H. W. Godwin, the granite work of the lower story was supplied by Messrs. Heslop & Wilson, of Aberdeen, the stonework by the Corsham Quarrying Company, the principal staircase by Mr. Alfred Walker, of Leeds, the joinery by Mr. Elliot, of Newbury, the stoves

and chimney pieces, baths, and lavatories, by Messrs. Callas, Reading, the heating arrangements by Messrs. Dew & Son, and the painting and ornamental glazing by Mr. Harry Childs.

PROPOSED TOWER, ST. JOHN'S CHURCH, CARLISLE.—It is proposed to erect a new tower for St. John's Church, Carlisle, from the designs of Mr. Higginson, architect, as a Diamond Jubilee memorial.

UNITARIAN SUNDAY SCHOOL, GATEACRE, LIVERPOOL.—The opening of the new Sunday school in connexion with Gateacre Unitarian Chapel, took place recently. The new building is situated near to the chapel, and is a brick structure, with stone facings, erected from the designs of Messrs. F. and G. Holme, architects, Liverpool, by Mr. G. Dale, of Gateacre. It includes a room capable of holding 200 persons, and two other rooms, with the usual accessories.

METHODIST CONNEXION CHAPEL, HARPFIELD, STAFFORDSHIRE. — The contract for the new Methodist chapel at Harpfield, which is situated on the Shelton New-road, has been placed in the hands of Mr. Cornes, Hanley. The architect for the work is Mr. Ambrose Wood, of Hanley. The building will consist of a schoolroom and chapel, containing two vestries and a choir gallery. The front will be faced with red brick, and the chapel will seat 200 people.

WESLEYAN CHAPEL, CHELMSFORD.—On the 2nd inst. the memorial stones were laid of new Wesleyan chapel and schools in the High-street, Chelmsford. Mr. J. Feast, of Haddenham, is the contractor, and the architects are Messrs. Gordon, Lowther, & Gunton, of London. The new buildings, which are being erected on a site adjoining the stone bridge, will comprise a chapel capable of seating 650 adults on the ground floor, with a gallery over the narthex and the west end of the nave. There will also be a children's gallery in each transept capable of holding 100. The west end of the chapel will face the High-street, and at the rear will be the boys' and girls' Sunday Schools.

NEW Y.W.C.A. BUILDINGS, LOWESTOFT.—The new Y.W.C.A. buildings, which have been built in Regent-road, Lowestoft, have just been opened. The architect is Mr. Clarke, of Lowestoft, and the builders, Messrs. Brett & Son, of Lowestoft.

NORTH OF SCOTLAND BANK HEAD OFFICE.—Alterations are being carried out at the head office of the North of Scotland Bank, Aberdeen. The work is being carried out under the direction of Mr. Marshall Mackenzie, A.R.S.A. The walls of the vestibule are to be lined with polished granite slabs. The polished dado will extend from the floor to a height of about 8 ft., and the jambs and lintels of the two doorways are also to be made of polished granite. Granites of three different shades will be used, namely, from Rubislaw, Kemnay, and Corennie quarries. This part of the work has been entrusted to Messrs. A. Macdonald & Co., Limited. Messrs. James Bannochie & Sons, have undertaken the internal decorative work.

ST. THOMAS'S INFANT SCHOOL, HUDDERSFIELD.—A new infant school in connexion with St. Thomas's Day Schools, Manchester-road, erected by the firm of Messrs. Starkey Bros. (Limited), in memory of the late Canon Snowden, M.A., was opened recently. The school, which occupies a site near the west end of the church, is Early English in style. It will accommodate 125 children. The architect is Mr. T. H. Farrar, of Halifax, and the contractors (all of Huddersfield) are:—Messrs. Abraham Graham & Sons, masons; Messrs. Moody Bros., carpenters and joiners; Messrs. Crossley & Bold, plumbers; Mr. W. E. Jowitt, slater and plasterer; and Mr. S. Kendall, painter.

RE-OPENING OF SKELMORLIE U.P. CHURCH.—This church, after alterations and enlargement, has been re-opened. The additions to the church comprise a chancel and a transept, which have been carried out from the designs by Mr. William Leiper, Glasgow. The sitting accommodation has been increased to nearly 600 sittings. The organ has been reconstructed and added to by Messrs. Merrilless & Son, of Glasgow. The contractor for the mason work was Mr. William Steel, builder, Greenock; joiner work, Messrs. Hutcheson & Grant, Glasgow; plumber work, Messrs. Archibald Watson & Co., Glasgow; painter work, Messrs. A. & J. Scott, Glasgow and Skelmorlie; plaster work, Mr. Quinten Tannock, Greenock; glazier work, Mr. George Hunter, Glasgow; smith work, Messrs. George Adam & Son, Glasgow; heating, by Messrs. James Boyd & Sons, Paisley; tile and marble work, by Messrs. Kean & Wardrop, Glasgow. Mr. James Mair acted as clerk of works.

CATHOLIC APOSTOLIC CHURCH, BUXTON.—This building, erected in Darwin-avenue from the designs of Mr. W. R. Bryden, of Buxton, has just been opened. It will accommodate about 150 people.

NEW FREE CHURCH, FEARN, ROSS-SHIRE.—A new church for the Free congregation of Fearn was opened recently. There is a nave and two transepts, while galleries extend around the greater portion of the church. Sitting accommodation is provided for between 800 and 900 persons, and there is also a hall adjoining which contains seats for about 120 persons. The building was designed by Mr. Macdonald, Inverness.

CONGREGATIONAL CHURCH, PONKEY, RHOSLLANERCHRUGOG.—A new Welsh Congregational Church was recently opened in Bank-street, Ponkey. The chapel is built of red Ruabon facing bricks and terra cotta, part of the façade being of Cefn freestone. The size of the chapel is about 48 ft. by 36 ft., and the vestry is 20 ft. by 15 ft. There is also a boiler-room measuring 12 ft. by 10 ft., and the chapel has seating accommodation for about 230. The cost is about 1,100*l.*, the architect is Mr. Gummow, Wrexham, and the builder, Mr. J. Davies, Ruabon.

PROPOSED PUBLIC BUILDINGS, ILFORD.—At the Ilford Urban District Council offices, recently, Col. A. C. Smith, R.E., held a Local Government Board inquiry into the application of the Council to borrow 15,000*l.* for the provision of public buildings, comprising a large hall, offices, and technical institute and library; 2,275*l.* for purposes of street improvements; 740*l.* for purposes of public baths; and 620*l.* for works of sewerage. There were present amongst others, the Clerk to the Council (Mr. J. W. Benton), the Surveyor (Mr. Shaw), the Sanitary Inspector (Mr. King), and Mr. B. Woollard, the Architect for the proposed buildings.

WESLEYAN CHURCH, SMETHWICK.—A new Wesleyan church, which has been erected in Waterloo-road, Smethwick, was opened on the 3rd inst. The church is built upon a site fronting Waterloo and Sycamore-roads, and it is constructed of brickwork, with stone dressings, the interior walls being finished with plaster (coloured a neutral tint) and stone, and the roofs covered with red tiles. The main entrance-porch faces Waterloo-road. This gives access to lobbies. A similar and separate entrance situated in the tower, and immediately adjoining, gives access to the gallery by a staircase. The plan of the church consists of nave, with aisles and chancel, in which seats are arranged for the choir. The organ-chamber is placed on one side of the chancel, and the ministers' vestry upon the opposite side; also the choir vestry, with lavatory accommodation. The church is about 90 ft. in length, 45 ft. in width (inclusive of aisles), and 31 ft. high. The floor is laid to a gradient towards the pulpit. The seating accommodation is for about 650 persons. The aisles have been laid with wood blocks, and the floors of the entrance-porch, lobbies, passage at rear of chancel, lavatories, &c., are laid with tesselated tiles. A feature of the exterior is a stone spire springing from a tower situated next the main entrance, and rising to about 80 ft. in height. The interior woodwork is of pitch-pine and red deal, the roofs of nave, aisles, and chancel are open-framed. The heating, upon the low-pressure system, is by Messrs. Hoden & Son. The wrought-iron fencing and gasfittings have been carried out by Mr. Edwin Glover. The stained glass throughout has been supplied by M. T. H. Yates, of Smethwick. The builders were Messrs. J. Harley & Son, of Smethwick; and the architects were Messrs. Ewen & J. Alfred Harper, of Birmingham. The cost of the structure is about 3,500*l.*

FREE LIBRARY, CAMBRIDGE.—A branch library has been erected near the railway bridge, Mill-road, Cambridge. The building is carried out in red brickwork, red terra-cotta, and red Mansfield stone, with a slate roof. The building consists of one large room 107 ft. long by 24 ft. wide. On the north side there are eight large windows, the top portion being arranged to open, and in addition, there is a lantern, with glazed side and end lights, running the whole length of the building. The whole of the building is heated by hot water on the low pressure system. The floor, except over the basement, is constructed of wood blocks. A lobby has been arranged with swing doors, giving separate entrance to the reading room and lending library, and is paved with oak wood blocks. Over the entrance there is a gable. On each side of the gable a lion in red Mansfield stone, supporting a shield with the Borough arms thereon, is fixed. The architect was Mr. F. Waters, and the builders were Messrs. Coulson & Lofts.

SANITARY AND ENGINEERING NEWS.

LOUGHBOROUGH SEWAGE WORKS, &C. — The members of the Birmingham branch of the Institution of Civil Engineers visited the works at Loughborough for the disposal of the sewage and refuse of the town, recently carried out by Mr. A. W. Cross, C.E., the late Borough Surveyor. The party was met and conducted over the works by Mr. A. H. Walker, C.E., the Borough Surveyor, and Mr. A. S. Butterworth, C.E., of Coventry, the late resident engineer. The afternoon was occupied by a drive to the Swithland reservoir and waterworks of the Leicester Corporation, where luncheon was provided by Mr. J. B. Everard, C.E., the engineer for the works. Having spent some time there, the drive was continued by the Hall Gates Storage Reservoir to the Cropstone Waterworks, after inspecting which, under the guidance of Mr. F. Griffith, C.E., the party proceeded to Leicester.

WEDNESFIELD SEWERAGE SCHEME.—Col. Coke, Inspector to the Local Government Board, held an inquiry at Wednesfield recently respecting an application of the District Council to borrow 7,500*l.* for sewerage works. Mr. J. W. Stirk, Clerk to the Council, and Mr. Berrington, engineer for the works, appeared in support of the application, and Dr. Reid represented the County Council. The proposed works were explained, and there was no opposition to the scheme.

NEW RESERVOIR, BATH WATER WORKS.—On the 8th inst., in the Monkswood Valley, about seven miles to the north-east of Bath, and on the borders of Gloucestershire and Somerset, the new reservoir constructed by the Bath Town Council was opened by the Mayor (Mr. G. Woodiwiss). The work is over nine acres in extent, and contains 51,000,000 gallons. Mr. W. Fox, of Westminster, has been the engineer, and Messrs. W. Neave & Son, of Paddington, the contractors. The reservoir has cost over 35,000*l.* No filtering beds are provided, but a carefully fitted straining well is constructed at the point of outlet.

STAINED GLASS AND DECORATION.

MEMORIAL WINDOWS, ST. THOMAS'S CHURCH, DOUGLAS.—A stained glass window, in memory of Mrs. Jane Dalby, of Douglas, is to be erected in the church of St. Thomas. Communion rails, which are part of a scheme for the redecoration of the chancel of the church, are also to be placed in the building. An engraved medallion, also, of the Queen's head is to be put up at the entrance to the chancel in commemoration of the Diamond Jubilee. The medallion is to be erected by Messrs. Gawthorp & Sayre, of London; and the window is being constructed by Messrs. Heaton, Butler, & Bayne, London.

WINDOW, GODMANCHESTER CHURCH.—Another of the windows on the south side of the Parish Church has been filled with stained glass to the memory of the late General Baumgartner. It is a three-light window. The work has been carried out by Messrs. Morris & Co., of Merton, Surrey, and the design is by Sir E. Burne-Jones.

WINDOW, CHURCH OF MARSKE-IN-SWALEDALE, YORKSHIRE.—The Bishop of Richmond recently visited Marske-in-Swaledale for the purpose of unveiling a window, which has been placed in the village church by Mrs. Cameron, of West Hartlepool, in memory of her husband, the late Colonel Cameron. The work has been carried out by Messrs. Percy Bacon Bros., London.

FOREIGN.

FRANCE.—M. Huet, the principal director of Public Works at Paris, has just retired, and the department is now going to be divided into two distinct services: one including the public roads, the drainage, and water-works—in a word, all that belongs to the technical part of engineering (M. Defrance will be at the head of this department); the other will include the foot-ways, the promenades, all architectural works, and works of Art. At the head of this department will be M. Bouvard, the architect of the 1900 Exhibition.——M. Ernest Barrias, sculptor, has been commissioned to execute the monument to the celebrated chemist Lavoisier, which is being erected by public subscription, and will be placed in the Place de la Madeleine, on the axis of the Rue Tronchet.——At the Ecole des Beaux Arts, the jury on the first-class architectural competition has awarded the first medals to MM. Perret and Paul Guadet, pupils of MM. Guadet and Paulin; Garet and Barber, pupils of MM. Blondel and Scellier de Gisors; and Phillipps, pupil of M. Pascal.——M. Denis Puech, the sculptor, has finished the model of the monument of Saint-Beuve. He has represented the famous critic in a meditative attitude. The pedestal, which has been designed by M. Scellier de Gisors, will be treated in a sober architectural manner, and simply ornamented with some inscriptions. This monument is intended for the Luxembourg gardens.——A new Lycée is being completed at Saint Germain-en-laye, and will be inaugurated next October.——The municipality of Sens has just opened a competition for the erection of a new Hotel de Ville, which is to be placed on the site of the present Mairie. The minimum expense is calculated at 300,000 francs. The competition will be closed on September 15.——The definite installation of the new Musée Cernuschi has necessitated the re-arrangement of several halls which had been given up to Japanese and Chinese china. The alterations will be finished by the month of October.——It is quite decided that a commemorative chapel shall be erected on the site of the terrible catastrophe in the Rue Jean Goujon.

GERMANY.—There seems to be an increasing tendency at Berlin for speculative builders to engage a number of small contractors to carry out various parts of their work, and in the event of financial difficulties, the latter mostly become seriously involved. As a rule the small contractor is an artisan or a foreman who has made some headway in his trade, and it is very regrettable that he should constantly be made the dupe of the speculator. It is curious that the paternal Government at Berlin has not found some means to prevent the constant repetition of this kind of thing.——The German Press is congratulating the Berlin authorities on having been able to buy the picture by Holbein, which was lately sold in London, and they very rightly express their wonder at our parting with one picture after another by artists whose work is not particularly well represented in this country.——The foundation stone has been laid of the first of three new churches at Lichterfelde, being erected under the patronage of the Empress. The architect is

Herr Doltbach, who will carry out the building in the Gothic style. The church is to seat 600.——We have referred to the new Berlin Building Act dividing the superficial area of every site into "zones," each of which can only be built on to a certain extent. The definitions of these "zones" are now under discussion, and there appears to be considerable variance as to the amount of ground to be left uncovered on building sites in the city proper. The Government proposes that a "zone" of six mètres, taken parallel to the frontage line, can be built on to the extent of 100 per cent., and a following "zone" of twenty-six mètres may be covered to the extent of 70 per cent., whilst ground further back from the street than thirty-two mètres is only to be built on to the extent of 60 per cent. The Municipality, on the other hand, advise that the first "zone" should have a depth of seven mètres, and the second to have thirty-one mètres, and they also wish the proportion to be increased in the second instance to 80 per cent.—— It is not improbable that the old Castle of the clerical Knights at Mayence will be shortly restored. A commission has been formed to report on the matter. We understand that the Municipality of Mayence has voted 30,000*l.* for the purpose, and that the Local Government has proposed an additional vote of 15,000*l.*——Lübeck is to have an equestrian statue of Emperor William I. An influential committee will act as assessors, and premiums to the extent of 300*l.* are to be awarded. A similar monument is to be erected at Eisenach, from the designs of Herr Zeyss.——The annual meeting of the Deputies of the Amalgamated Societies of German Architects is to be held at Kothenburg this year on the 10th and 11th of September. The meeting has had to be postponed owing to the military manœuvres taking place in that district during August. ——There is a considerable feeling at Berlin that the old Building Academy, which is a particularly ugly structure, should be pulled down, as it spoils the aspect of the Castle, the new cathedral, and the monument to Emperor William.——We regret to record the death of the oldest German architect, Franz Mertens, who died last month at the age of ninety, and whose work had a considerable influence in the development of modern German architecture.

SYDNEY.—On April 15 the Public Works Committee further examined Mr. W. L. Vernon, Government Architect, with regard to the proposed Parliament Buildings. The model of the buildings shown in the private room of the Committee was partly explained by Mr. Vernon, but his examination had not concluded when the Committee rose. The cost of the buildings alone would be 530,000*l.* The basement would be of trachite, and the remaining portion of the best Sydney sandstone. He would like the whole building to be of trachite, but there was the question of cost. The internal walls would be of brick, but in the more public parts he would recommend the use of colonial marble. For this, however, it would be necessary to offer some inducement to quarry-owners to open up their quarries. The height of the dome would be about 200 ft. —*Sydney Morning Herald.*

MISCELLANEOUS.

AN ANTIQUARIAN SOCIETY FOR NOTTS.—The Duke of St. Albans presided over a meeting at Nottingham, on the 1st inst., when the Thoroton Society, an antiquarian organisation for Nottingham and Notts, was formally inaugurated. The objects of the society were explained by Mr. Phillimore. It was proposed to have a simple working constitution, with rules similar to those of the Bristol and Gloucester Archæological Society, and the objects of the society were, in the first instance, to watch over antiquarian remains in the county, so that no harm be done to them, whether they were historical or mediæval in character. It was also proposed to have excursions, the first to Thoroton; and many old and valuable documents had been presented to the society. The Duke of St. Albans proposed the formation of the society, and expressed his pleasure that such an organisation was about to come into existence in Notts, where there were many objects of antiquarian interest. There was now a house at Red Hill, in the parish of Daybrook, which few knew was once the residence of the Bourbon family for hunting purposes during the French war. All these small things, as time went on, were forgotten, but a society of that kind would keep them still in the light. The Mayor of Nottingham seconded, and the proposition was carried.

TEMPLE BAR AND STATE PAGEANTS.—Messrs. Partridge & Cooper have sent us a short pamphlet on this subject, written by Mr. Henry Johnson and illustrated by Miss Elsie M. Cluff, which will be of some interest at this moment. It is well written and the illustrations are good.

WICKEN CHURCH, NORTHAMPTONSHIRE.—Referring to our paragraph as to the restoration of this church (page 517 *ante*) Mr. E. Swinfen Harris writes to say that though it is quite true that the "reredos is of oak," that part of the work does not belong to the present restoration but was given to the church some twenty years ago, being carried out from his designs, and decorated by Messrs. Clayton & Bell.

A "SELF-SHARPENING" PENCIL.—The makers of the "Blaisdell self-sharpening paper pencil" have sent us some specimens for our opinion. The title is as misleading as such catch expressions usually are. The "self-sharpening" portion is only the holder or covering of the pencil, which, instead of cedar wood, is of paper tightly rolled in spirals, portions of which are detachable at regular distances with the point of a penknife, and that section of the paper can then be unrolled and more lead uncovered. It saves the trouble of cutting the wood and the litter of splinters, but the business of sharpening the lead is of course left just as before; and when the patentees state in their circular that with this pencil "the fingers are not soiled with blacklead" in cutting, they are stating what they must know perfectly well is not the fact. The Blaisdell pencil is a clever invention and has real advantages, and it is a pity the patentees should have thought it necessary to state imaginary ones which do not exist. We may observe that the pencil is a good deal heavier than a cedar-mounted one of the same size.

ELECTRIC LIGHT SUPPLY, MANCHESTER.—The Manchester Corporation having applied to the Local Government Board for sanction to borrow 130,000*l.* for the purpose of extending the electric lighting works and system, Colonel J. T. Marsh, R.E., held an inquiry in the Mayor's Parlour recently. It was stated that the present demand for the electric light in Manchester far exceeds the supply. The capacity of the plant was equivalent to the supply of current represented by 128,000 lamps of eight-candle power, but the demand for the current down to a very recent date was represented by 161,594 lamps, showing a deficiency of 33,594 lamps. The principal new works proposed to be constructed consisted of two direct driven electric generators of 2,500 horse power, six Lancashire boilers, similar to those already provided, and five tubular boilers; also two economisers, each having 480 tubes. In addition to these works a very large outlay upon additional mains would be necessary. On March 31 last the total outlay on electric lighting was 309,190*l.* 19s. 10d., and the estimated cost of works which were included in previous applications for loans, and which had not yet been executed, was 40,809*l.* 0s. 2d. The further estimated outlay was 130,000*l.*, making a total of £480,000. Alderman Higginbottom then explained the electric lighting scheme in detail. Dealing with the varying capacity of the plant he said that in 1893 it was 40,000 eight-candle lamps, that in 1894 it was increased by 16,000 lamps, and that in 1895 and 1896, up to March, 1897, it was increased by 72,000 lamps, making a total of 128,000 lamps. Another side of the progress was shown as follows:—In 1893 there were 289 consumers and 32,716 lamps; in December, 1894, the consumers were 624 and the lamps 60,298; in December, 1895, the consumers were 1018 and the lamps connected 93,290; in December, 1896, the consumers were 1466 and the lamps 133,504; and on May of this year the consumers were 1620 and the lamps connected 147,068. There were also awaiting connexion 52 customers and 14,526 lamps, making the total number of consumers connected and awaiting connexion 1676, and the number of lamps connected and awaiting connexion was 161,594. Comparing the consumption of last year with the year ending March, 1896, there was an increase of no less than 973,678 units, or 54 per cent. The whole of the consumption, amounting to 2,775,107, last year was, said Alderman Higginbottom, for private purposes. Public lighting of the three squares had, however, given great satisfaction. The cost of lighting the three squares was 10*l.* a year less than the cost of gas.

NORTHERN ARCHITECTURAL ASSOCIATION: VISIT TO THE LEEDS STEEL WORKS.—The Directors of these works, having invited the members and practising associates of the Northern Architectural Association to visit their works on the 9th inst., to view the manufacture of steel in its various processes from the ore to the finished girder, a large party of architects accepted the invitation. The company placed three saloon carriages at the architects' disposal, and provided lunch upon arrival and carriages to convey the party to the works and back to the station. The Leeds Steel Works received its present title, and was registered as a limited company, in 1888, but previously was known as "The Aireside Iron and Steel Works." Mr. Walter Scott, of Newcastle-on-Tyne, has purchased from time to time the property of the other partners, and may now be practically termed owner of the works, which cover an area of twenty-five acres, the yearly output being 70,000 tons of steel, and the wage roll amounts to 70,000*l.* per annum. The stocking ground is commanded by a 10-ton travelling crane, which has a span of nearly 100 ft. The sheds and yards are intersected by railway lines, on which six locomotive engines and eight steam travelling cranes are continuously at work. The electric light is in full use throughout the night. Mr. Walter Scott, together with Mr. Vaughan, conducted the party through the works.

STREET IMPROVEMENT, MIDDLESBROUGH.—In the minutes of the Streets Committee, presented to the Middlesbrough Town Council, estimates prepared by Mr. Baker, Borough Engineer, for three schemes of street improvement in connexion with the tramways extension were submitted. The streets named are Ferry-road, Durham-street, Cleveland-street, Queen's-square, Albert Bridge, Exchange-place, Albert-road, Grange-road, Linthorpe-road, Linthorpe-avenue, Linthorpe-crescent, Bridge-street East, Dock-street, Zetland-road, Marton-road, Corporation-road, Newport-road (including relaying sett paving), Parliament-road, Calvert-street, Oxford-road, and North Ormesby-road. The first estimate is for paving across the whole width scoriæ bricks on concrete, with new channels, relaying kerbs, new kerbs and gullies where required—dedicated streets, 23,933*l.* 11s.; undedicated streets, 3,071*l.* 1s.; total, 27,004*l.* 12s. Estimate No. 2—For macadam, with new channels, relaying kerbs, new kerbs and gullies where required—dedicated streets, 9,729*l.* 5s.; undedicated streets, 1,233*l.* 15s. 6d.; total, 10,963*l.* 0s. 6d. Estimate No. 3—Ordinary macadam, with new channels, relaying kerbs, and gullies where required—dedicated streets, 7,146*l.* 13s.; undedicated streets, 899*l.* 14s. 6d.; total, 8,046*l.* 7s. 6d.

CAPITAL AND LABOUR.

THE THREE TOWNS BUILDING STRIKE.—The Master Builders' Association have received a communication from the Carpenters' Strike Committee in reply to theirs of the 29th ult. The carpenters state, "We are willing to meet a deputation of your members to discuss trade rules without prejudice. As regards your resolution, *re* 'mobbing' of carpenters, we deny it, and coming from men of the world we cannot think it was seriously meant." With reference to the general bearing of the dispute with the carpenters, the Association have ascertained by means of a circular sent round to the builders who have men on strike, that there are working for them at the present time more than 200 non-society carpenters, exclusive of a considerable number of apprentices, many of whom are competent workmen. Carpenters are still reported to be coming into the town. The notice given by the Exeter branch of the Amalgamated Society of Carpenters and Joiners for 1d. an hour rise in wages expires on July 1. At present they receive 6d. an hour, being 1½d. less than the carpenters in the Three Towns.

EDINBURGH PLUMBERS' WAGES.—A meeting of the Edinburgh branch of the United Operative Plumbers' Association of Scotland was held recently in the Oddfellows' Hall, Edinburgh, to consider the reply from the employers regarding the proposed by-laws. The operatives had previously requested a standard rate of wages of 9d. per hour. The masters, however, offered 8½d. per hour according to ability for first-class men, and it was agreed to accept this offer, which is to take effect as from July 1. The masters have also conceded time and a quarter for holidays, and they have agreed to adhere to the old rule as to work outside a two-mile radius. A by-law as to arbitration between employers and employed in the event of disputes has been passed as amended by the masters, with the restrictions that twelve days be allowed for the completion of the negotiations. A request that three months' notice instead of six months' be necessary before any alterations on the by-laws take effect has been granted by the masters giving the date for their coming into operation at February 1.

THE DISPUTE IN THE NORTHWICH BUILDING TRADE.—On the 3rd inst. the dispute between the Northwich and district bricklayers and their employers was practically settled. With the exception of two of the master builders, all the firms in the district have conceded an advance of 1d. per hour, making 9d. instead of 8d. This is the amount demanded by the men, who have been on strike some weeks.

THREATENED STRIKE OF DUNDEE MASONS.—A meeting of the operative masons of Dundee was held in Plumbers' Hall, Bain-square, Dundee, on the 4th inst., to consider upon a course of action in view of the refusal of the employers to grant an increase of ½d. per hour upon the present rate of wages. It was intimated at an early stage of the proceedings that one firm had granted the advance desired. After a discussion, lasting fully two hours, it was decided to test the feeling of the meeting as to whether the men should enforce their demands. The vote was taken by ballot, when it was resolved to come out on strike, and to remain out until the increase should be granted. The number of men affected by the strike is between 500 and 600. The present rate of wages is—for hewers, 8½d. per hour, and for builders, 9d. per hour. At a private meeting of the master builders of Dundee, held the same night, unknown to the operatives, the wages question was again considered, and it was ultimately resolved, it is stated, to raise the wages by ½d. per hour to hewers and builders.

NEWCASTLE MASONS AND THEIR HOURS.—A demand having been made by the masons of Newcastle and district to have the working hours reduced to 44½ per week, a meeting of master builders was held at the offices of their Association recently, and it was decided that they could not agree to the proposed alterations.

THE KEIGHLEY BUILDERS' STRIKE.—The Mayor of Keighley recently called together five representatives of the master builders, and five of the labourers now on strike, in order to ascertain the possibility of a settlement. The parties met at the Crown

Ironworks, but no common ground could be reached. The men's representatives declined to accept anything short of the immediate advance to 6d. per hour, nor would they consent either that the Mayor himself should settle the matter, or in conjunction with Mr. James Walsh. The total difference between the latest terms offered by the masters is only about 13s. per man extending over three months, and the strike has now lasted three or four weeks.—*Leeds Weekly Express.*

THE BARNSTAPLE MASONS' AGITATION.—Barnstaple masons are agitating for increased pay, and at a meeting recently it was resolved to ask for a rise from 5d. to 6d. an hour. The men have given their masters three months to consider the matter, and if at the end of that time they do not meet their employés, the latter will cease work.

THE PLASTERERS' AND LABOURERS' DISPUTE, DOUGLAS.—The master plasterers of Douglas and their workmen being unable to arrive at a satisfactory settlement in the dispute which commenced on December 14 last, the Douglas Trades and Labour Council had the matter under consideration at a special meeting held some time ago, and it was decided that it would be in the interests of the workmen and the general public that the plasterers and labourers should work for any employer that would pay their wages and sign the working rules. A resolution to that effect was forwarded to the Plasterers E.C. for their approval, and word has been received back that the E.C. leaves the matter in the hands of the Douglas plasterers. The Douglas plasterers are agreeable to the resolution, and it is expected that several employers will concede the men's demands, and push on with the work at once.—*Manx Sun.*

MEETINGS.

SATURDAY, JUNE 12.

St. Paul's Ecclesiological Society.—Visit to the Chapel, &c., at Hampton Court Palace, under the direction of Mr. Ernest Law.

Incorporated Association of Municipal and County Engineers.—Meeting at Llandudno.

British Institute of Certified Carpenters.—Visit to St. Albans, leaving St. Pancras at 2.25 p.m.

MONDAY, JUNE 14.

Royal Institute of British Architects.—(1) Business meeting. (2) Special general meeting, adjourned from the 31st ult., to further consider the Report of the Council on the Election of Candidates for Fellowship. 8 p.m.

Clerks of Works' Association.—Carpenters' Hall. 7.30 p.m.

British Institute of Certified Carpenters.—Special meeting, to be held at 29, New Bridge-street. Paper by Mr. C. T. Aston on "Woodworking Machinery." 7.30 p.m.

Society of Engineers.—Professor H. W. Umney on "The Compression of Air by the Direct Action of Water." 7.30 p.m.

WEDNESDAY, JUNE 16.

Carpenters' Hall, London Wall.—Examination in Carpentry and Joinery. 6.

Society of Arts.—Conversazione, to be held at the South Kensington Museum. 9 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary meeting of the members. 8 p.m.

THURSDAY, JUNE 17.

Society for the Encouragement of the Fine Arts.—Dr. Phené, F.S.A., on "Greek and Italian Colonies in Pre-Roman Britain, and Græco-Italian Art in Pre-Roman London." 8 p.m.

Society of Antiquaries.—8.30 p.m.

Society of Engineers.—Visit to the London Section of the Manchester, Sheffield, and Lincolnshire Railway (extension to London) works, now in progress.

Carpenters' Hall, London Wall.—Examination in Carpentry and Joinery. 6.

FRIDAY, JUNE 18.

Carpenters' Hall, London Wall.—Examination in Carpentry and Joinery. 9.30.

SATURDAY, JUNE 19.

Carpenters' Hall, London Wall.—Examination in Carpentry and Joinery. 2.30.

Edinburgh Architectural Association.—Annual Excursion Visit to (1) Linlithgow Palace. (2) St. Michael's Church. (3) Kinneil House. (4) Bonhard House. (5) Bo'ness. (6) Old Grange.

RECENT PATENTS:

ABSTRACTS OF SPECIFICATIONS.

11,119.—PRESSES FOR BRICKS, TILES, &c.: *J. Jones.*—In order that bricks, &c., shall be pressed to a uniform thickness independent of the exact bulk of clay fed into the "brick box," inventor adopts a brick box having a top die of two or more chief parts, moving the one upon the other, one part to form the top face of the brick and the other part to form the frog or indent, this latter or "frog-piece" fits into a plate or cup provided with bolts, around which are placed compression (special or otherwise) springs. When said springs are properly adjusted, the pressure of said cup on top of brick box is increased exactly as the pressure of the clay is increased upon said cup upon the descent of the frog-piece. Thus any reasonable variation in bulk of clay will not affect thickness of brick, &c., but will only effect depth of frog or indent.

14,156.—EXTRACTING AND WEATHER-PROOF VENTILATORS: *T. Whitehead.*—Invention is adapted specially for ship's use, but can be applied to buildings. An air shaft is fixed through the base on which are placed a series of vertical guards, which, together with the outer guards, support a ceiling plate with weather-cover over. Winds or sprays from heavy seas entering on the weather-side are directed by the outer guards into the chambers, the curved sides of which break the force and expel wind through the vent holes and, while passing it, extract the air from the exit slits.

14,170.—PAVEMENT WITH METALLIC INSETS: *C. B. Löhr.*—Inventor claims a paving material consisting of a mass of concrete, asphalte, or other suitable material, in the surface of which are inserted or embedded a series of suitably shaped bodies of metal, or other material, harder than the mass, the said inset bodies being of approximately equal form and size and regularly placed.

14,718.—BORING TOOLS: *H. P. Hamilton.*—Invention refers to construction of boring tools actuated by hand, lever, and rachet mechanism, whereby differential motions are communicated to boring tool and screwed spindle. Inventor's improvement consists in the relation and form of the head or chuck, rachet wheel, screwed spindle, &c.

16,787.—DOMESTIC FIREPLACES AND HEARTHS: *J. W. Taylor.*—At that part of hearth which contains the fire, inventor forms a sloping recess of fire-bricks or blocks. Above the recess fire, grid or bars are placed, horizontally or sloping. An ash-pan slides in sloping recess beneath the grid. This ash-pan is easily withdrawn and emptied. The sloping space containing it constitutes a closed hot chamber under ordinary conditions, to which, however, air can at all times be admitted by withdrawing ash-pan to some extent.

6,590.—SANITARY PIPE MACHINES: *J. S. W. Davis and others.*—Invention relates to sanitary pipe machines for forming pipes with a sharp bend or radius, particularly "knuckle" bend pipes, by mechanical means. Apparatus consists of a detachable ring in sections, a curved plate or its equivalent fixed to the die-plate, in combination with the ordinary parts of a sanitary pipe machine.

7,505.—WINDOW FASTENERS: *J. Roberts.*—Invention consists in a pivotted block secured to frame in front of sash, into a groove in face of which slides a wedge attached to frame by a chain, &c. Any vibration or rattling of the sash will tend to tighten wedge in the groove, and press sash firmer against its frame.

NEW APPLICATIONS FOR LETTERS PATENT.

MAY 24.—12,744, W. Chapman, Vertical Spindle for Wood-working Machines.—12,745, W. Wilkins, Window Sash Fastener.—12,762, G. Read, Whitewash and Distemper Brushes.—12,787, E. Hughes, Lead Junction Making without Solder.—12,804, W. Pettit and Others, Window Sash Fasteners.—12,824, G. Bortmann and R. Munkwitz, Door Stops.—12,830, S. McClellan, Frames and other Attachments for Bit Braces.—12,835, C. Heidecke, Tools for Operating upon Stone, Metal, Wood, &c.

MAY 25.—12,864, S. Pearson, Automatic Flushing Arrangement.—12,871, J. Edmundson, Hanging Window Sashes, and in the Pockets of Sash Window Frames.—12,903, H. Tidswell, Window Sash Fastener.—12,905, J. Powell, Window Sash Fasteners.—12,916, B. Thomas and H. Rees, Sash Fastener.—12,917, G. Seale, Sash Fastener. 12,918, G. Hopkins, Sash Fasteners.—12,920, R. Ewing, Joints of Earthenware Pipes.—12,943, E. Passingham, Sharpening Tools.—12,956, E. Thomas and A. Hobman, Building Bricks.

MAY 27.—13,016, J. Ollier and W. Brown, Cutters for Square Moulding and similar Wood-working Machines.—13,017, J. Ollier and W. Brown, Wood-working Machines for Moulding Balusters, &c.—13,026, W. Chrometzka, Fireproof Ceilings.—13,035, C. Hett, Surveyor's Level of the Suspended Mirror type.—13,040, H. and C. Gammon, Automatic Syphon Flushing Cistern for Water Closets.—13,065, S. Jablonski, Isolating and Fireproof Material.—13,072, D. Jackson, Fastening for Cupboard and Similar Doors.—13,076, W. Owen and J. Hughes, Water Cisterns and Fittings for Flushing Water Closets.—13,086, J. Marsh, Flushing Syphon Cistern.

MAY 28.—13,176, A. Smillie, Chimney Pots to Prevent Down Draughts.—13,189, J. Law and J. Crane, Sash Fasteners.—13,198, W. Fairweather, Automatic Window Fastening Device.—13,220, A. Boote, Automatic Transfering and Washing-off Machine for Tiles.—13,238, A. Moses, Saw-filing Machines.—13,255, W. Cree, Cutting Tools.—13,263, T. Marshall, Sash Fastener.—13,265, D. Evans and J. Jones, Sash Fasteners.

MAY 29.—13,319, H. Jansen, Ceilings and Walls.—13,326, G. Oliver, Wall Decoration.

PROVISIONAL SPECIFICATIONS ACCEPTED.

7,032.—H. Pitt, Fastenings of Locks and Latches.—8,367, A. Lidster, Door Holder and Stop.—10,301, R. Ewing, Joints of Earthenware and Other Pipes.—10,698, W. Potter, Mortising Chisel.—11,385, W. Terrey, Regulating Feed Tap for Flushing Cisterns, &c.—11,673, J. Cole, Window Sash Fasteners.—11,687, G. Healey, Sash Fasteners.—11,689, R. Roberts, Sash Fasteners.—11,715, W. Henley and Others, Apparatus for Use in Erecting Buildings and Other Structures of Concrete.—11,833, J. Wood, Window Sash Fasteners.—11,903, H. Alexander, Machine for Pressing Bricks.—11,975, E. Pim, Ornamenting Wood.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to opposition for two months.

12,184, F. Lynde, Lavatory Basins, Baths, &c.—17,430, G. Walters, Lath for Ceilings, Walls, &c.—2,767, W. Thompson, Hollow Building Blocks and Apparatus for making same.—9,315, C. Richardson, Asphaltic Pavements, &c.—10,149, F. Marienfeldt, Stoves and Fireplaces.—10,183, A. Habershon, Fireplaces.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

May 26.—By C. RAWLEY CROSS & CO.

Kensington.—51, 61, and 67, Bolingbroke-rd., u.t. 96 yrs., g.r. 25*l.*, e.r. 155*l.*	£1,565
Shepherd's Bush.—59, Loftus-rd., u.t. 68 yrs., g.r. 5*l.*, r. 45*l.*	365
Acton Vale.—19 and 20, The Parade, u.t. 71 yrs., g.r. 22*l.*, r. 66*l.* 4s.	445

By NICHOLS, SMITH, & ALDER (at Bristol).

Slimbridge, Glos.—"Tumpy Green Farm," 77 a. 3 r. 39 p., f.	£3,525

By MESSRS. SPELMAN (at Norwich).

Norwich.—Carrow-rd., "Point House," and 1 a. 1 r. 17 p., f.	1,800
Thorpe-road, "Fern Bank," f.	840

By T. PARRY (at Newport).

Llanbaddock, Monmouth.—"Little Cefn Ila" farm, 151 a. 3 r., f.	1,700
"Pear Tree Cottage" and 5 a. 3 r. 3 p., f.	450
Enclosures of land, 36 a. 0 r. 30 p., f.	1,275
"Panty Cwcw" farm, 95 a. 3 r. 38 p., f.	3,675

May 27.—By WILLIS & CROUCH (at Uxbridge).

Hillingdon, Middlesex.—Colham Green, five copyhold cottages and a plot of land	335
Iver, Bucks.—Iver Heath, two cottages and half an acre, f., r. 10*l.* 10s.	160
Bowler's Farm, 1 a. 2 r. 19 p., f., r. 18*l.*	460
Shredding Green, a copyhold house, r. 19*l.*	310

By M. JEANS (at Devizes).

Avebury, &c., Wilts.—"Combley's Farm," 273 a. 0 r. 23 p., f.	2,250

By FULLER, MOON, & FULLER (at Croydon).

Croydon.—Park Hill-rd., "Elmwood" and 2¾ a., u.t. 67 yrs., g.r. 17*l.* 15s.	2,000
High-st., &c., f.g.r. 130*l.*, reversion in 47 yrs.	5,560
Caterham.—Holliday's Bottom, f.g.r. 9*l.*, reversion in 71 yrs.	210
Holliday's Bottom, f.g.r. 18*l.*, reversion in 23 yrs.	560

By T. LAVINGTON (at Devizes).

Devizes, Wilts.—Bath-rd., a cottage and 8 a. 2 r., 0 p., f.	800
"Sunnyside Farm" (part of), 41 a. 3 r. 2 p., f.	3,000
Worton, Wilts.—Various enclosures of land, 29 a. 2 r. 16 p., f.	2,015

By C. HAWKINS (at Ely).

Witham, &c., Cambs.—A freehold house and 0 a. 3r. 6 p.	150
Various enclosures of land, 18 a. 1 r. 6 p.. f. and c.	285
Coveney, Cambs.—Various enclosures of land, 43 a. 0 r. 10 p., f	755
Wilburton, Cambs.—An enclosure of land, 5 a., f.	185

May 28.—By RUSHWORTH & STEVENS (at Farnborough).

Farnborough, Hants.—Peabody-rd., "Nole's" and "Long's" Cottages, f.	120
York-rd., "Brian," "Ontario," and "Quebec" Cottages, f.	190

By HARDS & BRADLY (at Bexley Heath).

Bexley Heath, Kent.—4 to 9, Victoria Cottages, f., r. 66*l.* 6s.	400

By R. AUSTIN (at Southampton).

Durley, &c., Hants.—"Durley Manor Farm," 188 a. 1 r. 32 p., f.	5,750
"Trullingham's Farm," 71 a. 3 r. 5 p., f.	2,100
"Mincingfield Farm," 205 a. 2 r. 18 p., f	4,850
"Brown Heath Plantation," 27 a. 2 r. 3 p., f.	575
Various enclosures of land, 105 a. 3 r. 27 p., f.	3,710

By H. SPENCER & SONS (at Retford).

Laneham, Notts.—"Manor House," and 130 a. 0 r. 6 p., f. and c.	5,395
Enclosures of land, 75 a. 1 r. 36 p., f. and c.	3,282
"The Ferry Boat" Inn and 17 a. 2 r. 19 p., f. and c.	1,360
Two houses and two cottages and 3 a. 0 r. 30 p., f.	711

May 29.—By HOOKER & WEBB (at Bletchingly).

Bletchingly, Surrey.—South Park Estate (remaining portions) 150 a. 0 r. 14 p., f.	4,405

By RIPPON, AYRE, & CO. (at Budleigh Salterton).

East Budleigh, Devon.—"The Mount" enclosure, 3 a. 1 r. 2 p., u.t. 2,766 yrs.	145

By FOX & VERGETTE (at Peterborough).

Werrington, Northants.—Farmhouse and enclosures, 81 a. 2r. 23 p., f. and c.	2,700
Newborough, Northants.—A freehold house and 2 a. 1 r. 4 p.,	330
Enclosures of land, 56 a. 0 r. 16 p., f. and c.	2,742
Eye Green, Northants.—Six copyhold cottages and 1 a. 1 r. 38 p.	410

May 31.—By W. A. BLAKEMORE.

Kentish Town.—99, Fortess-rd., u.t. 69 yrs., g.r. 10*l.*	435
Hornsey.—Tottenham Lane, "Wyndham College," u.t. 94 yrs., g.r. 9*l.*	595

By MOSS & JAMESON.

Brixton.—7 and 17, Speenham-rd., u.t. 84 yrs., g.r. 15*l.* 10s., r. 85*l.*	725
Herne Hill.—249 to 255 (odd), Railton-rd., u.t. 49 yrs., g.r. 8*l.* 10s.	950

By NOKES & NOKES.

Bow.—Turner's-rd., i.g.r. 20*l.*, u.t. 60 yrs., g.r. 10*l.*	180

By ELLIOTT, SON, & BOYTON.

Cavendish-sq.—21, Welbeck-st., u.t. 31½ yrs., g.r. 30*l.*, r. 150*l.*	1,310
Marylebone.—32 and 36, Devonshire-st., u.t. 25 yrs., g.r. 78*l.*, r. 340*l.*	2,860
Oxford-st.—62 and 63, Castle-st. East, u.t. 43 yrs., g.r. 38*l.*, r. 200*l.*	2,320
68, Wells-st., u.t. 16 yrs., g.r. 10*l.*, r. 100*l.*	620

By H. HOOPER.

Highbury.—14, Kelvin-rd., u.t. 62 yrs., g.r. 8*l.*	330
Maida Vale.—38, Messina-av., u.t. 83 yrs., g.r. 10*l.* 10s., r. 40*l.*	375
Finchley.—5, Durham-rd., f., r. 33*l.*	510

By J. W. KEMSLEY.

Woodford.—1, Mornington-villas, u.t. 70 yrs., g.r. 5*l.* 17s. 4d., r. 40*l.*	365
Crouch Hill.—24 and 28, Sparsholt-rd., u.t. 49 yrs., g.r. 11*l.* 10s., r. 65*l.*	575
Bermondsey.—8 to 15, Marigold-st., u.t. 76 yrs., g.r. 60*l.*	210

COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

COMPETITIONS.

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered.
*Plans for Municipal Buildings	Rugby U.D.C.	1st, 30 gns. and 2nd, 20 gns.	July 21
*Plans for Art Gallery and Public Library	Bury Corp.	75*l.* 50*l.* and 25*l.*	Aug. 31

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
*Alterations, Schools	Coedfranc School Bd.	J. C. Rees, St. Thomas-chmbrs, Church-pl. Neath	June 14
*Pipe Sewers, &c.	Shoreditch Vestry	J. R. Dixon, Town Hall, Old-street, E.C.	June 15
Granite and Flints	Barking (Essex) T.C.	C. J. Dawson, Surv. East-street, Barking	do.
Sewering, Flagging, &c. Devonshire-street	Keighly Corp.	W. H. Hopkinson, C.E. Boro' Engr.	do.
Schools (Pett National), Hastings		Rector of Pett, Hastings	do.
Additions to Farm, Main of Shiels, Aberdeen		Mr. Macdonald, 16, Union-street, Aberdeen	June 16
Workhouse	Hambledon (Surrey) Union	E. L. Lunn, Surv. 36, High-street, Guildford	do.
Banking Premises, Northallerton	Barclay & Co. Ltd.	G. G. Hoskins, Archt. Darlington	do.
Offices, &c. Knutsford	Bucklow Union	R. J. McSeath, Archt. Sale, near Manchester	do.
Pipe Sewer, Ovenden-road	Halifax Corp.	E. R. S. Escott, C.E. Town Hall	do.
Eight Houses, Urquhart-road	Aberdeen Town Coun.	J. Rust, City Archt. Union-street	June 17
Additions to House, Woodlands, Elgin		J. Smith, Seafield, Estate Office, Elgin	do.
Hospital, Cardiff-road, Newport, Mon.		R. J. Lovell, Archt. 46, Queen Victoria-st. E.C.	June 18
Hotel, Mullion Cove, Cornwall	Mullion Cove Hotel Co. Ltd.	S. Hill, Archt. Redruth	do.
Schools, Peter's-road	Great Yarmouth Sch. Board	Bottle & Olley, Archt. Queen-street	June 19
Drainage Works	Goole R.D.C.	E. C. B. Tudor, Council Offices	do.
House, Dalmally, N.B.		J. Macdonald, Fern Bank, Dalmally	do.
*Sewers, Manholes, Chambers, &c.	Holyhead U.D.C.	J. L. Griffith, Stanley House, Holyhead	do.
Laboratories at Grammar School, Carlisle		G. D. Oliver, Archt. 5, Lowther-st. Carlisle	June 21
Additions, &c. to School, Orchard-street	Derby School Board	A. Macpherson, Archt Tenant-street, Derby	do.
*Sewerage Works	Hendon U.D.C.	S. S. Grimley, Offices, The Burroughs, Hendon, N.W.	do.
*Public Convenience	Sandgate U.D.C.	A. R. Bowles, Surveyor's Offices, Sandgate	do.
Street Works, Haddon-street	Ilkeston (Derby) Corp.	H. J. Kilford, Surv. Town Hall	June 23

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered
Chimney (70 yards high)	Colne (Lancs) Corp.	T. H. Hartley, Town Hall	June 23
*Pipe Sewers, Manholes, &c.	Enfield U.D.C.	R. Collins, Court House, Enfield	do.
*Foundations, Buildings, Steel Roofs, Tanks, &c.	Hull Corp.	A. E. White, Town Hall	June 24
Electric Lighting Buildings	do.	do.	do.
Road Materials	Canterbury Corp.	City Surv. 28, St. Margaret's-street	do.
Additions, The Redoubt, Kingswear, Devon	R. Smith	W. F. Tollit, Archt. Gate House, Totnes	do.
Coals and Coke	County Borough of Croydon	Boro' Engr Town Hall	do.
*Four Cottages, Stable, and Shed	do.	T. Walker, Town Hall	do.
*Erecting Offices	Royal Insurance Co. Liverpool	T. F. Doyle, 4, Harrington-street, Liverpool	do.
*Making-up and Laying Concrete Flags	Walthamstow U.D.C.	G. W. Holmes, Town Hall	June 25
Gasholder Tank	Bridlington Gas Co.	Newbigging & Son, Engrs. 5, Norfolk-st. Manchester	June 26
Masonry Dam, Loch Katrine	Glasgow Corp.	J. M. Gale, Engr. 45, John-street, Glasgow	do.
School, Bala, N. Wales	———	R. Lloyd Jones, Mount-place, Bala	do
*Sewerage Work, Reservoir, &c.	Tewkesbury R.D.C.	J. Villar, 1a, Cambray, Cheltenham	June 28
Car Shed, Buckland	Dover T.C.	H. E. Stilgoe, C.E. Town Hall	June 29
Sewerage Works	Buckfastleigh (Devon) U.D.C.	J. Willcocks, Surv. Council Offices	June 30
*Brick and Steel Girder Bridge and Walls	Bucks C.C.	R. J. Thomas, County Hall, Aylesbury	July 1
Gravel and Sand (6,000 tons)	Cardiff Corp.	C. H. Priestley, C.E. T. Hall	do.
*School Buildings	Luton Sch. Bd.	J. R. Brown & Son, Market Hill, Luton	July 5
*New Wing, Class Rooms, Drainage, &c. and at School	Pocklington Grammar School	Demaine & Brierley, 13, Lendal, York	No date
Villa, Dalston-road, Carlisle	T. Williamson	Johnston Bros. Archt. Lowther-street, Carlisle	do.
Factory, Huntley, N.B.	G. Arnott & Sons	J. Jamieson, Archt. 2, Commerce-street, Elgin	do.
Church and Presbytery, Denaby Main, Yorks	———	Empsall & Clarkson, Archt. 7, Exchange, Bradford	do.
Four Cottages, Blackfine, co. Durham	———	P. Stokoe, 71, Durham-rd. Blackfine	do.
Hotel, Mooragh, Ramsey, Isle of Man	———	W. Telford Gunson & Son, C.E. Marsden-st. Manchester	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.
*Clerk of Works	Coedfranc School Bd.	2*l.* 2*s.* per week	June 14
*Architectural Assistant	Bury Corp.	130*l.* per ann.	June 25

Those marked with an asterisk (*) are advertised in this Number. *Competitions*, iv. ***Contracts, pp.*** **iv. vi. viii. & xix.** ***Public Appointments, pp*** **xvi. & xix.**

By STIMSON & SONS.

Fulham.—Humbolt-rd., f.g.r. 75*l.* 12s., reversion in 98 yrs.	£1,975
Disbrome-rd., f.g.r. 47*l.* 5s., reversion in 98 yrs.	1,245
Bermondsey.—Bermondsey-st., i.g.r. 100*l.*, u.t. 53 yrs., g.r. 35*l.*	1,120
New Kent-rd.—Gurney-st., i.g.r. 42*l.*, u.t. 67 yrs., g.r. 42*l.*	860
Walworth.—Beresford-st., a leasehold rental of 80*l.* for 13½ yrs.	550
Islington.—Trinity-st., i.g.r. 36*l.*, u.t. 9½ yrs., g.r. 5*l.*	150
Peckham.—60 and 62, Lyndhurst-rd., f., r. 80*l.*	1,140
Felixstowe, Suffolk.—Orwell-rd., &c., two building plots, f.	300
Southwark.—6 and 8, Gladstone-st., r. 90*l.*; also l.g.r. 12*l.*, u.t. 31½ yrs., g.r. 20*l.*	690
Walworth.—42 and 43, Royal-ter., u.t. 43½ yrs., g.r. 9*l.*	185
New Cross.—262, Queen's-rd., u.t. 60 yrs., g.r. 10*l.*, r. 50*l.*	510

By W. H. COLLIER (at Harrow).

Harrow, Middlesex.—Rosslyn-cres., &c., various plots of building land, f.	5,743

By W. LUDLOW & BRISCOE (at Birmingham).

Chaddesley Corbett, Worcs.—The Brockencote Hall Estate," 45 a. 3 r. 33 p., f.	7,850

By H. HENDRIKS (at Birmingham).

Hockley Heath, Warwick.—"The Homestead," and 2 a. 2 r.. 33 p., f.	1,275
Birmingham, Warwick.—1, 2, and 3, Aberdeen-st., and 107, 109, 111, and 113, Winson Green-rd., u.t. 74 yrs., g.r. 20*l.* 18s. 10d., r. 173*l.*	1,910
Sparkbrook, Worcs.—284 to 290 (even), Stratford-rd., u.t. 96 yrs., g.r. 23*l.* 10s., r. 160*l.*	1,820

By W. THOMSON (at Liverpool).

Liverpool.—85, Low Hill, and 94 to 104 (even), Brunswick-rd., with the "Phœnix Hotel," u.t. 55 yrs., g.r. 29*l.* 7s.	9,500
2, 4, 6, and 8, Aigburth-rd., with the "Cressington Hotel," f.	10,010

June 1.—By DEBENHAM, TEWSON, & CO.

Kensington.—233 and 235, Kensington High-st., and 1 and 2, Baxter's-cottages, area 2,930 ft., f., r. 358*l.* 18s.	7,000
15, Holland-st., f., r. 85*l.*	1,850
22, Holland-st., f.	1,075
St. George's East.—41 and 42, Upper East Smith-field, area 1,585 ft., f.	1,450
Upper Warlingham, Surrey.—West Hall-rd., "West Hall," and 2 a. 3 r. 12 p., f.	2,000

By THURGOOD & MARTIN.

Corvedale, Salop.—"The Peaton Hall Estate," comprising 1,038 a. 1 r. 36 p., r. 1,274*l.*	20,000
Piccadilly.—C1 and D3, The Albany, f.	850
Acton.—4, Apsley-villas, u.t. 70 yrs., g.r. 12*l.* 10s., r. 52*l.* 10s.	425

By ROBINS, SNELL, & GORE.

Sidcup.—Hatherley-rd., "Kelleth," f., e.r. 65*l.*	£870

By EGERTON, BREACH, & GALSWORTHY.

Wandsworth.—7 and 9, Tonsley-pl., and the "Tonsley Arms" b.-h., u.t. 53 yrs., g.r. 10*l.* 16s. r. 91*l.* 16s.	1,250
Tottenham.—62 and 64, Vicarage-rd., f., r. 46*l.* 16s.	525
14 and 16, Gothic-villas, f., r. 36*l.* 8s.	400

By P. & G. GEEN.

Hampstead.—Netherwood-st., f.g.r.'s of 126*l.*, reversion in 70 yrs.	3,500
Lambeth.—129 and 131, Stamford-st., and i.g.r. of 43*l.*, u.t. 12 yrs., g.r. 49*l.*	395
147, Stamford-st., u.t. 12 yrs., g.r. 3*l.*, r. 65*l.*	300
25 to 30, Doon-st., u.t. 12 yrs., g.r. 13*l.* 10s.	800
22 to 25, Salutation-pl., u.t. 12 yrs., g.r. nil., r. 67*l.* 12s.	190

By OAKLEY, FISHER, & CO.

Islington.—59, Barnsbury-st., f., r. 26*l.*	230

By F. VARLEY.

Highgate.—2, 4, 6, and 8, Orchard-rd., u.t. 82 yrs., g.r. 21*l.*, r. 132*l.*	1,080

By FLEURET, SONS, & ADAMS (at Masons' Hall Tavern).

Wandsworth.—Lavender Hill, "The Crown Hotel," u.t. 50 yrs., r. 150*l.*, with goodwill	46,850
Peckham.—Rye-lane, "The Hanover Arms," u.t. 45 yrs., r. 120*l.*, with goodwill	32,550

By R. AUSTIN (at Southampton).

Southampton.—Northam, f.g.r. 220*l.*, reversion in 52 yrs.	6,000
Northam, f.g.r. 68*l.*, reversion in 958 yrs.	1,940

By HUSSEY & SONS (at Sidmouth Junction).

Clysthydon, Devon.—"The Auncke Estate," 45 a. 0 r. 22 p., f.	1,300

By A. PRESTON (at Ipswich).

Ashbocking, &c., Suffolk.—"The Red House Farm," 173 a. 2 r. 21 p., f.	2,200
Otley, Suffolk.—"The Swiss Cottage Farm," 30 a. 2 r. 4 p., f.	525
Brockford, &c., Suffolk.—"The Brockford House Farm," 93 a. 2 r. 28 p., f.	1,250
"Coles Farm," 117 a. 0 r. 20 p., f.	500

By G. LOVEITT & SON (at Coventry).

Wolston, Warwick.—"Mickle Hill Farm," 57 a. 1 r. 15 p., f.	975

By W. H. SHINER & WINTER (at Blagdon).

Blagdon, Somerset.—Seven freehold cottages and 3 r. 34 p.	661
"The Shrubbery" and 1 a. 1 r. 17 p., f.	700
Two freehold houses and 12 a. 2 r. 18 p.	1,470
Enclosures of land, 25 a. 0 r. 3 p., f.	1,305
"Ham Farm," 82 a. 3 r. 32 p., f.	£850
Enclosures of land, 24 a. 1 r. 15 p., f.	875
"Yew Tree Farm," 37 a. 0 r. 8 p., f.	1,500

June 2.—By FOSTER & CRANFIELD (at Enfield).

Enfield.—Laurel Bank-rd., eleven plots of building land, f.	245
Lancaster-rd., &c., twenty-six plots of building land, f.	620

By CLOUGH & CO. (at Denbigh).

Llanfairtalhaiarn, Denbigh.—"Waen Fawr Ucha Farm," 48 a. 1 r. 5 p., f.	650
Llannefydd, Denbigh.—"Voel Farm," and a plot of land, 78 a. 3 r. 39 p., f.	600
"Ty Cannol" and "Vron Haul Farm," 38 a. 1 r. 1 p., f.	400

June 3.—By HARDS & BRADLY.

Eltham.—93, High-st., u.t. 54 yrs., g.r. 4*l.*, r. 30*l.*	380
Isleworth.—The Woodlands, "Woodlands," f., r. 50*l.*	600

By DUNCAN & KIMPTON.

Clerkenwell.—27, Granville-sq., u.t. 33½ yrs., g.r. 3*l.* 4s., r. 53*l.*	400
Marylebone.—91, Salisbury-st., u.t. 41 yrs., g.r. 5*l.*, r. 52*l.*	285
Mile End.—3, 5, and 7, Clinton-rd., f., r. 61*l.* 2s.	500

By MAY & ROWDEN.

Hampstead.—3, Birchington-rd, u.t. 69 yrs., g.r. 6*l.*	680

By H. N. NEWTON & CO.

Kentish Town.—20 and 22, Peckwater-st., u.t. 52 yrs., g.r. 10*l.*	405

By W. R. NICHOLAS & CO.

Ingatestone, Essex.—"Maisonette," and 15 a. 0 r. 12 p., f.	4,000

By A. J. SHEFFIELD.

Poplar.—1, 3, and 5, Canton-st., u.t. 21 yrs., g.r. 9*l.*, r. 40*l.*	385
44, 45, and 46, Sussex-st., u.t. 55 yrs., g.r. 9*l.*	630
Plaistow.—148 and 150, Hollybush-rd., u.t. 94 yrs., g.r. 5*l.*	260

By NEWSON, EDWARDS, & SHEPHARD.

Islington.—1, 2, and 3, Colebrooke-row, f., r. 182*l.* 10s.	3,000
Canonbury.—48, Compton-rd., u.t. 48 yrs., g.r. nil, r. 46*l.*	600
Highbury.—49, Petherton-rd.. u.t. 52 yrs., g.r. 7*l.* 7s., e.r. 70*l.*	550
St. John's Wood.—20, Belsize-rd., u.t. 47 yrs., g.r. 10*l.*, e.r. 75*l.*	675
Barnsbury.—Muriel-st., f.g.r. 5*l.*, reversion in 60½ yrs.	150
Whitechapel.—Church-lane, a land tax of 12*l.* 16s. 8d.	300

Lambeth.—16 and 24, Vauxhall-walk, r. 79*l.*; also l.g.r. 8*l.*, u.t. 39 yrs., g.r. 12*l.* £525
Caledonian-rd.—No. 348, u.t. 52 yrs., g.r. 7*l.*, e.r. 6*o*. 485
Hornsey.—24, 26, and 28, Canon-rd,, f., r. 80*l.* 12s. 755

By DEBENHAM, TEWSON, & CO.

Sydenham.—58, Longton-grove, u.t. 54 yrs., g.r. 20*l.*, r. 90*l.* 1,000
Longton-grove, i.g.r. 16*l.*, u.t. 54 yrs., g.r. 1*l.* .. 300

By BLAKE & CARPENTER (at Croydon).

Croydon.—"North End, "The Conservative Club," area 9,800 ft., f. 9,400

June 4.—By GREEN & SON (of Hammersmith.

Battersea.—176 to 184 (even), Northcote-rd., u.t. 80 yrs., g.r. 50*l.* 10s., r. 250*l.* 3,150
Hammersmith.—21, Upper Mall, with wharf, c., r. 38*l.* 600

By B. P. ABRAMS.

Old Ford.—78, Armagh-rd., u.t. 58 yrs., g.r. 4*l.* .. 195

By HORNE, SON, & EVERSFIELD.

Cheshunt, Herts.—"The Old Parsonage" and 5½a., f. 1,700
Portland Town.—18, 19, and 20, Lower William-st., u.t. 31 yrs., g.r. 12*l.* 100
St. John's Wood.—6, High-st., u.t. 34 yrs., g.r. nil, e.r. 45*l.* 45
87, High-st , u.t. 23½ yrs., g.r. 5*l.* 5s., r. 66*l.* 550
Hampstead.—10, Sumatra-rd., u.t. 90 yrs., g.r. 6*l.* 10., r. 34*l.* 325

By J. C. PLATT.

Hammersmith.—23, Andover-rd., u.t. 62½ yrs., g.r. 3*l.* 3s. 235
73, Nasmyth-st., u.t. 72½ yrs., g.r. 5*l.* 175
Peckham.—Dennett's-rd., f.g.r. 50*l.*, reversion in 27 yrs. 1,500

By H. G. POTTER.

Hackney.—39, Lansdowne-rd., r. 32*l.*; and 13 and 32, Rutland-rd., u.t. 55½ yrs., g.r. 8*l.*, r. 56*l.* .. 960

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.

PRICES CURRENT OF MATERIALS.

TIMBER.		
Greenheart, B.G.	ton	£8/0/0 £0/0/0
Teak, E.I.	load	£11/10/0 £6/10/0
Sequoia, U.S.ft.cu.		1/8 1/10
Ash, Canada load		3/5/0 4/10/0
Birch, do.		3/15/0 5/10/0
Elm, do.		4/0/0 5/5/0
Fir, Dantsic, &c..		2/15/0 4/15/0
Oak, do.		2/10/0 3/10/0
Canada		5/5/0 6/5/0
Pine, Canada red		0/0/0 0/0/0
Do. Yellow		1/15/0 3/15/0
Lath, Dantsic, fath		4/10/0 5/10/0
St. Petersburg		5/0/0 6/10/0
Wainscot, Riga, &c., log		2/0/0 4/5/0
Odessa, crown		2/0/0 4/5/0
Deals, Finland 2nd & 1st std	100	9/0/0 9/10/0
Do. 4th & 3rd		9/0/0 9/10/0
Do. Riga		7/10/0 8/10/0
St. Petersburg, 1st yellow		£11/0/0 £13/10/0
Do. 2nd yellow		10/0/0 11/0/0
Do. white		9/10/0 11/10/0
Swedish		9/10/0 £6/10/0
White Sea		£0/10/0 £7/0/0
Canada, Pine 1st		£9/10/0 £5/10/0
Do. do. 2nd		£4/0/0 £6/10/0
Do. do. 3rd, &c.		£1/10/0 £0/0/0
Do. Spruce, 1st		£0/10/0 £2/0/0
Do. do. 3rd and 2nd		8/0/0 9/5/0
New Brunswick		£7/15/0 8/5/0
Battens, all kinds		5/0/0 £0/0/0
Flooring boards, sq., 1 in. prep. 1st		0 8/6 0/15/6
Do. 2nd		0/7/0 0/12/0
Other qualities—		0/5/3 0/6/9
Cedar, Cuba, ft.		/4½ /5
Honduras, &c.		/4 /5
Mahogany, Cuba		/5 /6½
St. Domingo, cargo av.		/4½ /5
Mexican, do. do.		/4 /5
Tobasco, do. do.		/4½ /7
Honduras, do.		/5 /6½
Box, Turkey, ton		£5/0/0 £5/0/0
Rose, Rio		£7/0/0 £4/0/0
Bahia		£6/0/0 £2/0/0
Satin, St. Doming.		0/0/7 0/2/0

TIMBER *(continued)*.		
Satin, Porto Rico	0/0/7	0/1/6
Walnut, Italian	0/0/8	0/0/7
METALS.		
Iron—Pig, in Scotland ..... ton	£5/5/0	£5/2½/0
Bar, Welsh, in London	£5/15/0	£5/17/6
Do. do. at works in Wales	£5/10/0	£5/12/6
Do. Staffordshire, in London.....	£6/5/0	£7/10/0
COPPER—British cake and ingot	£2/10/0	£3/0/0
Best selected ..	£3/0/0	£3/10/0
Sheets, strong..	£8/0/0	£8/10/0
Chili bars	£7/17/6	0/0/0
YELLOW MTL lb.	4¾d.	5d.
LEAD—Pig, English ...ton	£11/16/3	£11/17/6
English com. brands	£12/0/0	£12/2/6
Sheet, English 6 lbs. per sq. ft. and upwards ..	£13/2/6	0/0/0
Pipe.....	£13/12/6	0/0/0
ZINC—English sheet.....ton..	£20/10/0	0/0/0
Vieille Montagne	£21/10/0	0/0/0
Spelter	£17/3/9	£17/7/6
TIN—Straits	£61/2/9	0/0/0
Australian.....	£62/10/3	£63/0/0
English Ingots..	£64/15/0	£65/5/0
Banca	£61/0/0	0/0/0
Billiton	£59/15/0	£60/0/0
OILS.		
Linseed .....ton	£14/5/0	0/0/0
Cocoanut, Cochin	£7/15/0	0/0/0
Do. Ceylon	£4/0/0	0/0/0
Palm, Lagos.....	£4/10/0	0/0/0
Rapeseed, English pale	£7/10/0	£7/15/0
Do. Brown	£7/0/0	£7/10/0
Cottonseed ref. ..	£5/17/6	£6/10/0
Oleine.....	£8/10/0	£9/10/0
Lubricating U.S.	0/6/3	0/7/6
Do. black	0/4/9	0/6/6
TAR—Stockholm barrel	£2/0/0	0/0/0
Archangel.....	0/12/6	0/0/0
Turpentine.....	£1/0/0	£1/2/6

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays.* N.B.—We cannot publish Tenders unless authenticated by the name and address of the sender: and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

BRIDGNORTH.—For erecting new schools, Highley, for the Highley School Board. Messrs. R. Scrivener & Sons, architects, Hanley:—

W. Swain	£2,500 0	T. Morris	£2,250 0
H. Farmer	2,450 0	J. Sheppard & Son, Stourport*	2,237 0
R. Thompson	2,447 0	Bradney & Lloyd	2,198 0
H. Smith	2,402 10		
G. Bullock	2,370 0		

* Accepted subject to the approval of the Education Department.

BRENTWOOD.—For alterations and additions to "The Essex Arms Hotel," Brentwood, for Mr. Mersham. Mr. J. E. Pinder, architect, Bridge House, South Tottenham, N.:—

G. E. Todd	£1,590	Green & Smith	£1,539
H. Knight & Son	1,543		

BURTON LATIMER (Northants).—For the erection of a coffee-house and club, for the Burton Latimer Coffee-house Company, Limited. Messrs. Coales & Johnson, architects, Corn Exchange, Market Harborough. Quantities by the architects:—

G. Henson	£1,420 0	A. Lewis	£1,249 0
A. J. Ball	1,385 0	A. Lewin & Son, Kettering*	1,155 0
P. J. Dunham	1,321 13		

* Accepted.

CHESHUNT.—For the erection of three villa residences at Cheshunt, for Mr. Gocher. Mr. James Bunce, surveyor, Cheshunt:—

Pavey	£2,699	J. Haydon	£2,330
Critches	2,500	Robinson, junr.	2,300
General Builders' Assoc.	2,390		

CROMER (Norfolk).—For the erection of a boiler and exhauster-house, &c., for the Gas and Coke Company, Limited. Mr. Percy Griffith, C.E., 55, Parliament-street, Westminster, S.W.;—

James Riches, junr.	£910	James Gillings	£795
Girling & Smith	890	James White, Cromer*	790
W. Neil	842		

* Accepted.

DONEGAL (Ireland).—For the construction of reservoirs and water-supply works, for the Union Guardians. Mr. J. L. Devenish-Meares, C.E., Town Hall, Newry:—

Thos. J. Dixon	£3,276 2 0	T. McNally	£2,700 0 0
Hodges & Son	2 996 10 0	W. McLaman	2,557 14 6
D. McCaffrey	2,871 1 9	T. McKee & Sons.	2,531 19 8
Hegarty & Gault	2,853 8 2	Thos. Mochan	2,280 2 2½
T. MacClay	2,713 8 6	H. R. Blackburn	2,276 12 2

HASTINGS.—For the erection of school buildings, Priory-road, West Hill, for the U.D. School Board. Mr. F. H. Humphreys, architect, 6, Trinity-street, Hastings:—

C. Hughes	£7,271 0 0	J. Geary	£6,794 0 0
Barter & Gasson	7,268 12 10	Padgham & Hutchinson	6,719 5 0
E. Midmer	7,080 0 0	W. Small	6,461 1 0
Wallis & Sons	7,002 0 0	Ellis Bros.	6,453 10 0
J. Lester	6,957 0 0	D. H. Snow	6,393 0 0
A. H. White	6,818 0 0		

LONDON.—For new premises at Vine-street, for the Receiver for the Metropolitan Police District. Mr. J. Dixon Butler, Architect. Quantities by Mr. W. H. Thurgood:—

Holland & Hannen	£	Patmore & Fotheringham	£8,841
Kilby & Gayford	9,641	Scrivener & Co.	8,838
Lawrance & Son	9,480	Hart Bros.	8,770
Holloway Bros.	9,364	Perry & Co.	8,750
Lascelles & Co.	8,887	Grover & Sons	8,730
Higgs & Hill	8,874	Lathey Bros.	8,590

LONDON.—For renovations, decorations, and repairs, &c., at the Stratford Congregational Church, The Grove, Stratford, E. Messrs. Andrew Gray and H. Norman Gray, surveyors, 131, Earlham-grove, Forest Gate, E.:—

E. J. Hosking	£825 0 0	W. Wilson & Co.	£601 0 0
B. Berry	718 10 0	Fowler Bros.	585 7 6
J. W. Howlett & Son	641 10 0	Hawkey & Oldman*	492 0 0

* Accepted.

LONDON.—For the erection of a house at Rosslyn Hill, Hampstead, N.W. Mr. J. Gibbons Sankey, M.A., architect:—

F. T. Chinchen	£2,300	G. Davenall	£2,100
W. Tout	2,250	W. Pearce	2,045
T. R. Lamble	2,217		

LONDON.—For the proposed erection of new casual wards at Padoington, for the Parish of Paddington. Mr. F. J. Smith, architect, Westminster:—

F. & T. Higgs	£13,918	G. Neal	£12,726
Martin Wells & Co.	13 875	Chessum & Sons	12,300
T. Bendon	13,839	D. Charteris	12, 150
Stimpson & Co.	13,200	F. T. Chinchen	11.990
C. Wall	12,950	J. Steed	11,800

LONDON.—For addition and alteration to "The Devon Arms," Mare-street, Hackney. Mr. Harvey Roberts, architect, Lewisham:—

J. & W. Taylor	£1,497	Green & Smith	£1,396
Eames	1,440	Simpson & Cove*	1,360

* Accepted.

LONDON.—For alterations to "The Jolly Sailors," Rotherhithe. Mr. H. Roberts, architect:—

Todd	£1,119	Taylor Bros.	£950
White	1,047	Simpson & Cove	940
Grover	993		

LONDON.—For building warehouse, Cross Key's-court, London-wall, E.C., for Mr. Gerard J. Mathieson. Messrs. Barnes-Williams, Ford, & Griffin, architects:—

Holloway Bros.	£7,340	Lascelles	£6,925
Colls & Son	7,140	J. Smith & Sons	6,935
John Greenwood	7,120	Battley, Sons, & Holness	6,687
Howell J. Williams	6,985	J. W. Falkner	6,483
Higgs & Hill	6,940	H. L. Holloway	6,394

LONDON.—For the erection of club premises, Old Charlton, S.E., for the Charlton Conservative Club. Mr. John Rowland, architect, 24, The Village, Old Charlton:—

H. J. Stevens	£3,276 18 6	F. G. Minster	£3,070 0 0
W. Mills	3,166 0 0	T. Marney	2,996 10 0
H. L. Holloway	3,147 0 0	Thomas & Edge	2,989 0 0
Balaam Bros.	3,081 0 0	J. B. Sandford	2,785 0 0
Proctor	3,080 0 0		

LONDON.—For new shop front, marble work, &c., at 8, Churton-street, S.W., for Mr. A. J. Palmer. Mr. Alfred Howard, surveyor, 53, The Outer Temple, Strand:—

L. L. Leeder & Co.	£315	R. Wadsworth*	£278

* Accepted.

LONDON.—For building new skittle saloon at "The Grove Tavern," Lordship-lane, Dulwich, for Mr. Fruin:—

Watson	£585	Edwards & Medway	£450
Long	532	Simpson & Cove	430
Frampton & Co.	480		

LONDON.—For various decorative and sanitary repairs at 54, Nevern-square, Earl's Court, S.W. Messrs. Jno. W. Morley & Letts, surveyors, 185, Earl's Court-road, S.W.:—

Hy. Smith & Son	£215	Rugg & Son	£192
J. Whitaker	197	F. Holdstock, Earl's Court*	186

* Accepted.

LONDON.—For new drainage and entire renewal of internal sanitary arrangements, hot-water services, &c, at 165, Earl's Court-road. Messrs. Jno. W. Morley & Letts, surveyors, 185, Earl's Court-road, S.W.:—

J. Mears	£247	J. Fleming	£212
J. Whitaker	235	Rugg & Son, Earl's Court*	210

* Accepted.

LONDON.—For alterations to the "Vale of Health" Hotel, Hampstead, N.W., for Mr. Chas. Peters. Mr. Albert E. Pridmore, architect, 2, Broad-street Buildings, E.C.:—

Warburton & Goldring	£1,174	Marchant & Hurst	£894
Beer & Gash	987	Cooke & Macphail	859
Spencer & Co.	935	W. J. Davenport	839

LONDON.—Accepted for erecting new coachbuilder's shop at Messrs. Dottridge Bros', East-road, E.C.:—
John Welbking & Sons £350

LONDON.—For rebuilding the "White Hart," Rivington-street, Shoreditch. Mr. G. G. Page, architect, St. Olave's House, Ironmonger-lane, E.C.:—

Welbking & Sons	£754 10	Perkins & Co.	£647 0
Snewen Bros.	658 0	Coomber	510 0

LONDON.—Accepted for providing and fixing twenty-nine new solid deal window frames at the Wesleyan Chapel, William-street, Woolwich. Mr. W. Whincop, architect:—
Thomas & Edge £145

LONDON.—For alterations to Messrs. Furlong & Son's furniture depository, Woolwich. Mr. J. O. Cook, architect:—

Covil	£225	Thomas & Edge	£196
Hodgin	210	C. Kitley	193
Mills	201		

LONDON.—For building new warehouses, Nos. 30 and 32, Farringdon-road, for Messrs. John Greenwood & Son. Messrs. Bacon & Cobb, architects, 4, Copthall-chambers, E.C.:—

Perry & Co.	£6,317	Killby & Gayford	£5,902
Godson & Son	6,313	F. C. Hoskins, Tufton-street, Westminster*	5,844
W. Downs	5,950		
Harris & Wardrop	5,947		

* Amended and accepted.

LONDON.—Accepted for constructing a new power-lift at Abbey Buildings, Westminster, for Mr. W. P. Metchin:—
F. C. Hoskins, Tufton-street, Westminster £245

LONDON.—Accepted for alterations, additions, and new sanitary work, &c., at No. 194, Marylebone-road, Mr. C. Stanley Peach, architect:—
F. C. Hoskins, Tufton-street, Westminster £1,983 11 11

LONDON.—Accepted for alterations, &c., to "The Victoria," Kensal Rise. Mr. H. W. Budd, architect:—
F. C. Hoskins, Tufton-street, Westminster £224

LONDON.—For alterations and additions to the "Crown and Shears" public-house, Minories, E.C., for Messrs Hoare & Co., Limited. Messrs. Perry & Reed, architects, 9, John-street, Adelphi, W.C.:—

Clarke & Bracey	£3,337 0 0	Edwards & Medway	£2,799 0 0
Hall, Beddall, & Co.	3,060 0 0	H. Knight & Son, Tottenham*	2,695 0 0
Perry & Co.	2 889 0 0		
Welsh & Son	2,800 5 8		

* Accepted.

LONDON.—Accepted for erecting house and stables, Steele-road, Tottenham, for Mr. A. Woodward. Mr. J. E. Pinder, architect, Bridge House, South Tottenham, N.:—
H. Knight & Son, Tottenham £1,125
[No competition.]

MANORHAMILTON (Ireland).—For the construction of water-works, &c., for the Union Guardians. Mr. R. H. Dorman, County Surveyor, Armagh:—
M. Green, Donegal-street, Belfast £1,639

BRIGHTON.—For wood paving, &c., New-road and part of North-street, for the Town Council. Mr. F. J. C. May, C.E., Town Hall, Brighton:—

—	Providing and laying 9 in. by 3 in. by 5 in. Jarrah wood blocks on 7 in. Portland cement concrete foundation, including excavation, running-in joints, covering, &c., the whole complete.	Providing and laying 9 in. by 3 in. by 5 in. Karri wood blocks on 7 in. Portland cement concrete foundation, including excavation, running-in joints, covering, &c., the whole complete.	Providing and laying 9 in. by 3 in. by 5 in. Swedish deal wood blocks on 7 in. Portland cement concrete foundation, including excavation, running-in joints, covering, &c., the whole complete.	Providing and laying 9 in. by 3 in. by 5 in. Swedish deal creosoted wood blocks, on 7 in. Portland cement concrete foundation, including excavation, running-in joints, covering, &c., the whole complete.	Supplying and laying extra concrete, composed of one Portland cement to six clean shingle, including excavation for same.	For any other kind of wood.
	Per super. yd. s. d.	Per super yd. s. d.	Per super yd. s. d.	Per super. yd. s. d.	Per cubic yd. s. d.	Per super. yd. s. d.
G. J. Anderson	15 6	—	—	—	13 0	
A. & F. Manuelle*	14 11½	14 11½	10 11½	11 10	13 0	Jarrahdale Jarrah. 16 0
Mowlem & Co.	16 0	16 0	12 9	13 4	16 6	
W. Griffiths	16 9	16 9	—	—	13 6	
W. H. Holman & Co.	19 0	19 0	14 3	15 4	18 0	

* Accepted. One half of New-road to be laid with "Jarrah" wood blocks, and one half with Swedish deal creosoted wood blocks, and the part of North-street to be paved, to be laid one half with "Karri" wood blocks, and the other half with Swedish deal creosoted wood blocks.

MARNHULL (Dorset).—For the erection of a bridge, Little King's Mill, for the Dorset County Council. Mr. W. J. Fletcher, C.E., County Surveyor, Wimborne :—

Masonry and General Work.

R. Curtis	£758	0	0
S. Curtis	735	0	0
H. Bartlett, Shipton Gorge, Bridport*	560	10	0

Ironwork.

Dorman, Long, & Co., Middlesbrough*	342	0	0

Fixing Ironwork.

N. Harris, Bridport*	36	0	0

* Accepted.

MIDDLESBROUGH.—For the erection of a large block of business premises (exclusive of all fixtures and fittings). Linthorpe-road, for the Co-operative Society, Limited. Mr. W. G. Roberts, architect, 61, Albert-road, Middlesbrough :—

W. & H. Pounder	£7,134	0	J. Lambert & Son £5,782 0
Wm. Thompson, Crescent-road accepted).	7,078	15	[All of Middlesbrough].

PENGE.—Accepted for making-up Phœnix-road and laying sewer and drains for Mr. W. R. Quested. Mr. Albert E. Pridmore, surveyor, 2, Broad Street-buildings, E.C. :—

D. Brewer, Plumstead £410 15

PETERSFIELD (Hants).—For the construction of a reservoir, or the Urban District Council. Mr. H. T. Keates, surveyor, Petersfield :—

Pedrette & Co.	£1,456	0	T. Wood & Son £938 11
B. Cooke & Co.	1,258	0	J. Ford 680 11

PONTYPOOL.—For the erection of house and shop, Crane-street, for Messrs. Woodley & Co. Mr. N. M. Brown, architect, Somerton-road, Newport, Mon. :—

A. E. Parfitt	£840	0	John Jenkins £725 0
J. Monks	825	0	Morgan & Evans, Ponty-
T. Westacott	763	19	pool (accepted) 727 17

ST. ALBANS.—For erecting a house in Hill Side-road, for Mr. T. H. Johnson. Mr. Griffith, architect, London :—

Longmire & Co.	£1,619		J. T. Bushell £1,465
Wibley & Jervis	1,475		J. & W. Savage 1,320

ST. ALBANS.—For a pair of semi-detached villa-residences, Upper Worley-road. Mr. S. D. Edmunds, architect, 50, Hill-street, St. Albans :—

C. Miskin & Sons	£1,100		G. Wiggs £880
G. Veale	980		J. & W. Savage 850

SOUTHEND-ON-SEA.—Accepted for the erection of a pair of houses. Mr. Arthur T. A. Bowyer, architect, 92, Leadenhall-street, E.C. :—

J. Bayliss, Forest Gate £675

STOKE-ON-TRENT.—For making new streets for the North Staffordshire Cricket and Athletic Sports Company, Limited, at Stoke-on-Trent :—

T. Godwin	£1,521	0	F. Barke £1,346 8
H. P. Embrey	1,440	0	A. Bullock, Stoke* 1,330 0
Smith & Taylor	1,415	0	* Accepted.

SURBITON.—For decorative and sanitary works to Norbury House, Beaufort-road, Surbiton, Surrey, for Miss E. Forster. Mr. Walter J. Ebbetts, architect, Savoy House, 115, Strand, W.C. :—

J. M. Macey & Sons	£926	0	Adkins Bros. £665 15
T. Messum	698	0	R. Scase & Sons, Sur-
Foord & Sons	670	10	biton (accepted) 649 0

SUTTON.—For additions and alterations to Stanley House, Mulgrave-road, Sutton, Surrey, for Mr. Wm. Berrell, C.E. Mr. Walter J. Ebbetts, architect, Savoy House, 115, Strand, W.C. :—

G. H. Lewis	£831		J. B. Potter £805
H. Adams	820		F. J. Shopland, Sutton* 787

* Accepted.

TICEHURST (Sussex).—Accepted for the erection of a Wesleyan Chapel. Quantities by Mr. A. Willmer Pocock, architect and surveyor, 66, St. Anne's-hill, Wandsworth, S.W. :—

L. Edwards, Hawkhurst £946

WALTHAMSTOW.—For erecting lavatories and additions to Grosvenor House, Hoe-street, for the Urban District Council of Walthamstow. Mr. Geo. W. Holmes, Engineer :—

		Add for tiling.
Barratt & Power	£1,785	£83
W. Lawrence, Waltham Abbey*	1,675	78
Stuart & Dayman	1,688	36

* Accepted.

WEALDSTONE (Middlesex).—For the erection of a factory at Wealdstone, Harrow, for Messrs. Hamilton & Co. Messrs. G. R. Tasker & Sons, surveyors, 28, John-street, Bedford-row, W.C. :—

Turner	£8,647		Beer & Gash £8,423
Young	8,647		Lawrance & Sons 8,259
Faulkner	8,583		Killby & Gayford 7,930

WORKINGTON.—Accepted for additions to Victoria Schools, for the Workington School Board. Messrs. W. J. Scott & Co, architects, Victoria-buildings, Workington :—

Masonry.—Geo. Mann, John-street	£420 0
Joinery.—John Steel, Bolton-street	280 0
Slating.—Jas. Lythgoe, Gray-street	104 5
Plumbing and Gasfitting.—D. M. Walker, Washington-street	79 0
Plastering.—John Lawson, Gordon-street	54 0
Painting and Glazing.—Geo. Davies, John-street	20 0

All of Workington.

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A. H.—S. W.—W. C.—A. E. P.—Amounts should have been stated.

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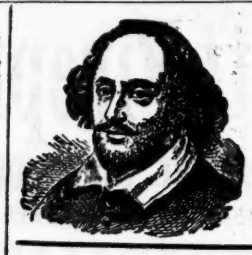

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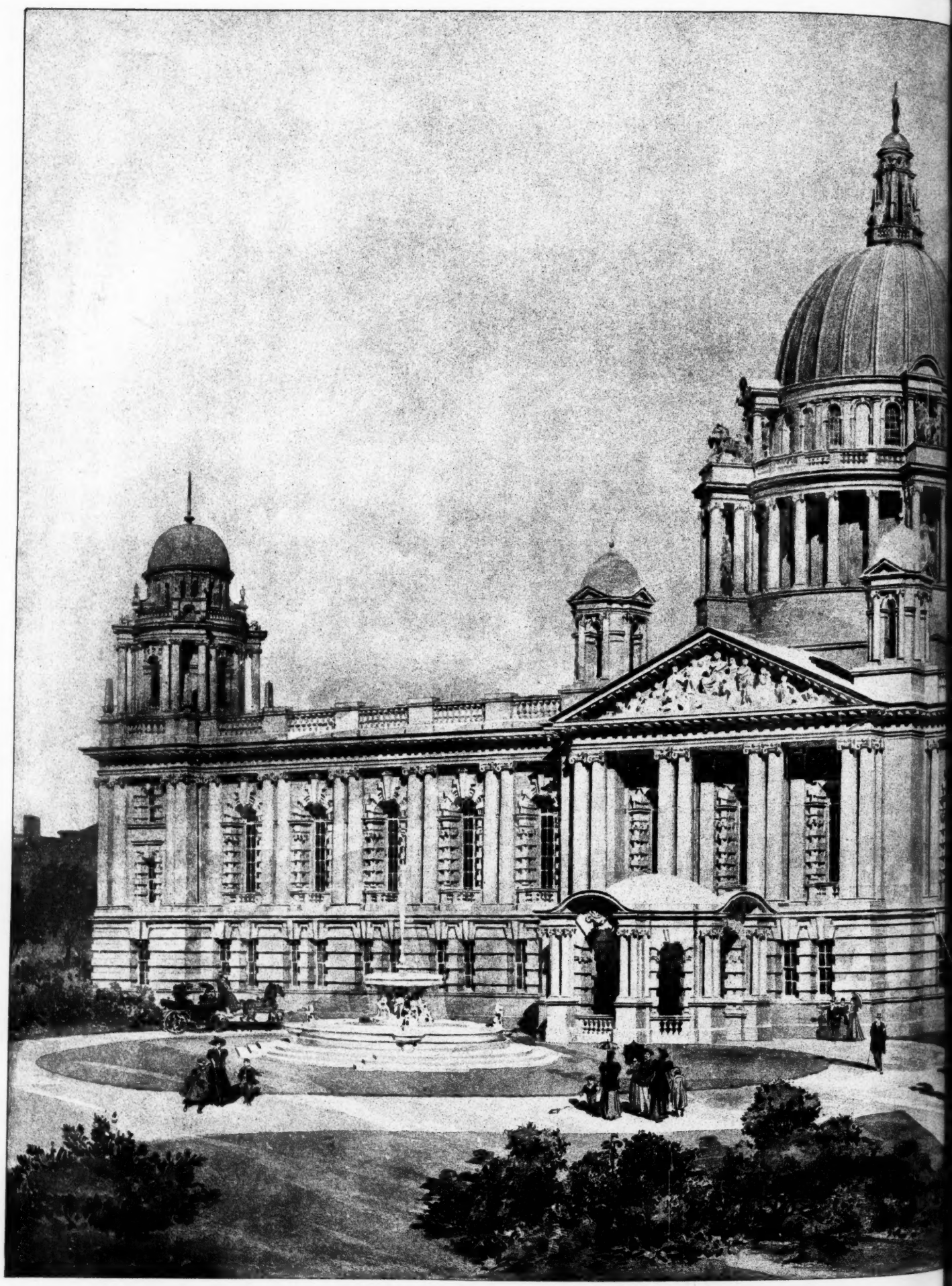

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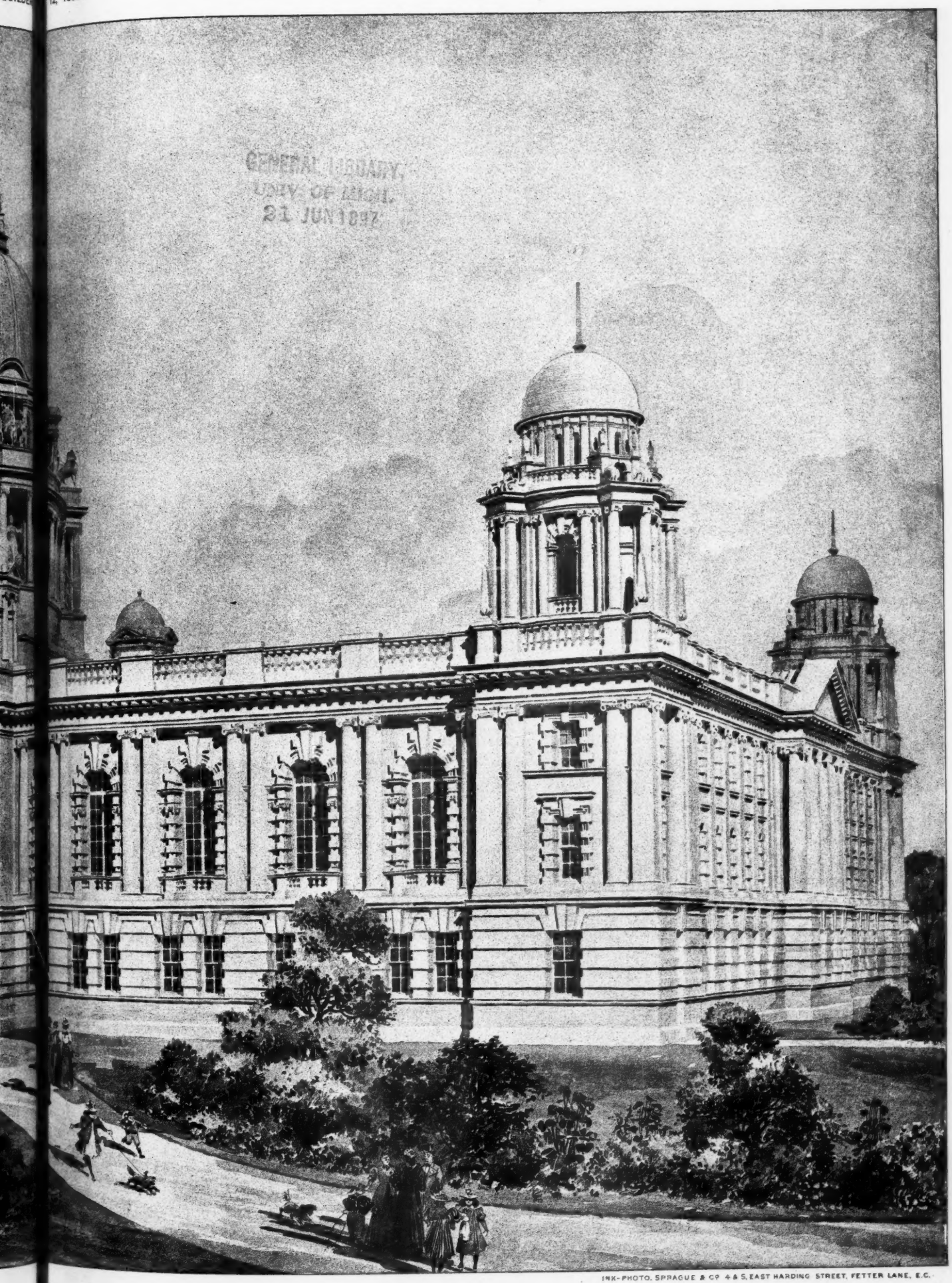

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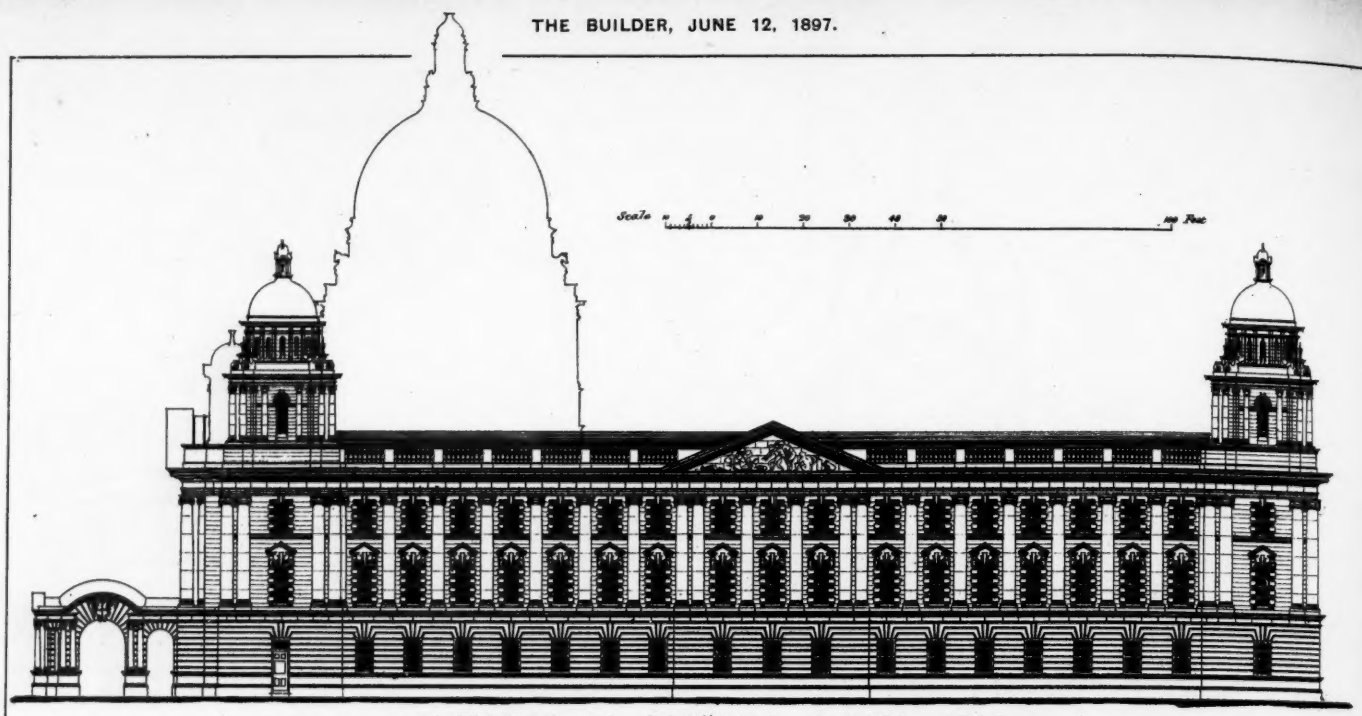

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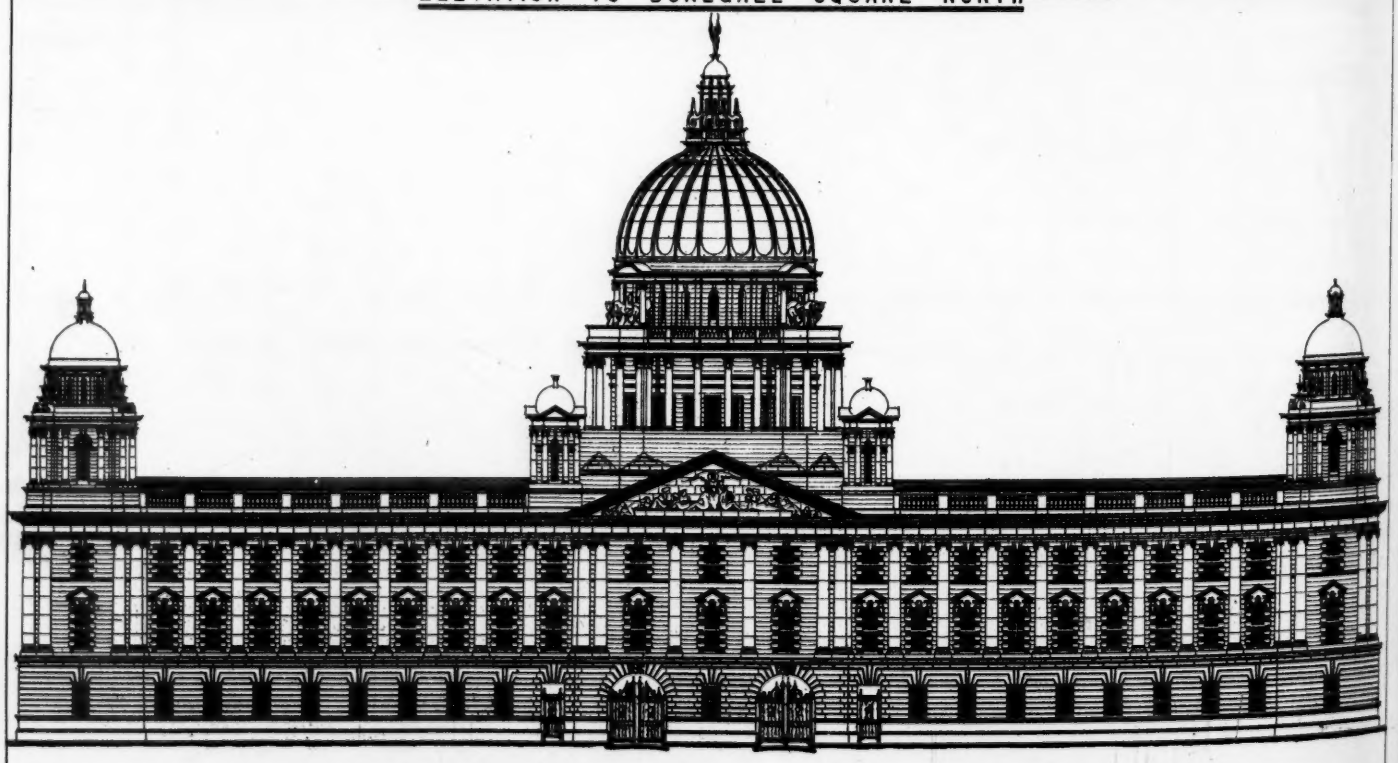

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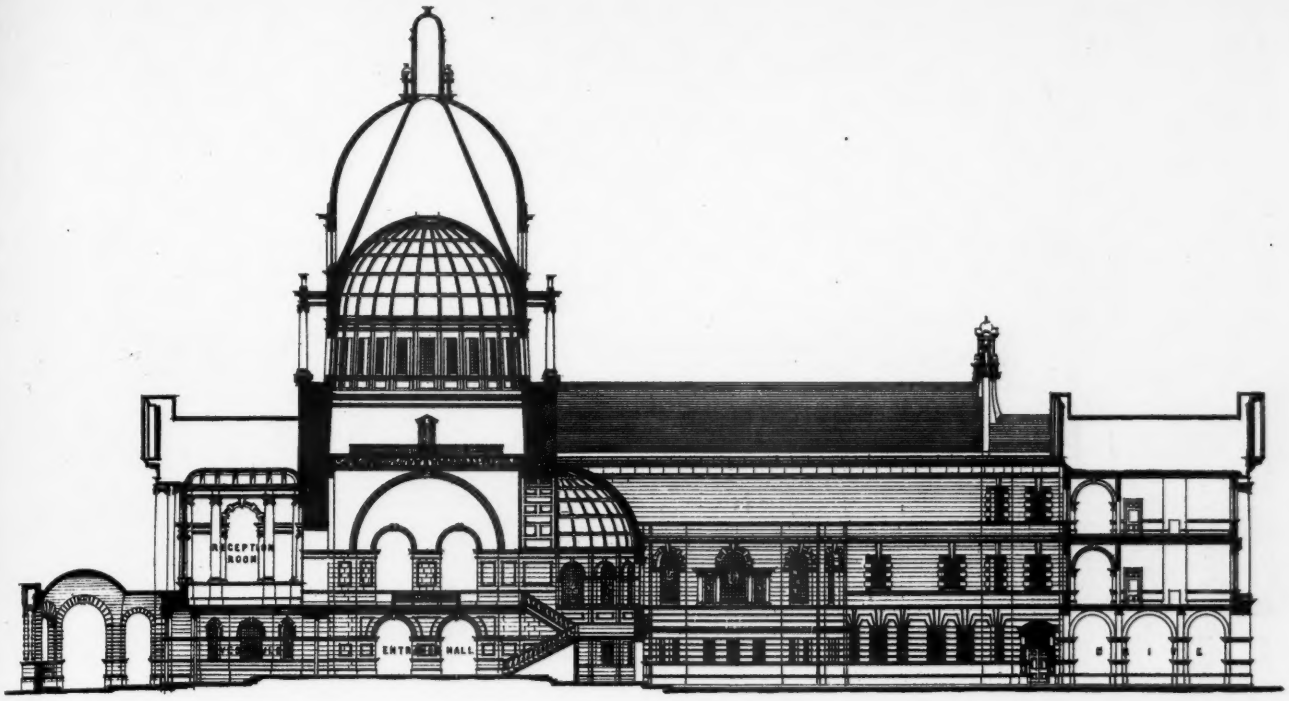

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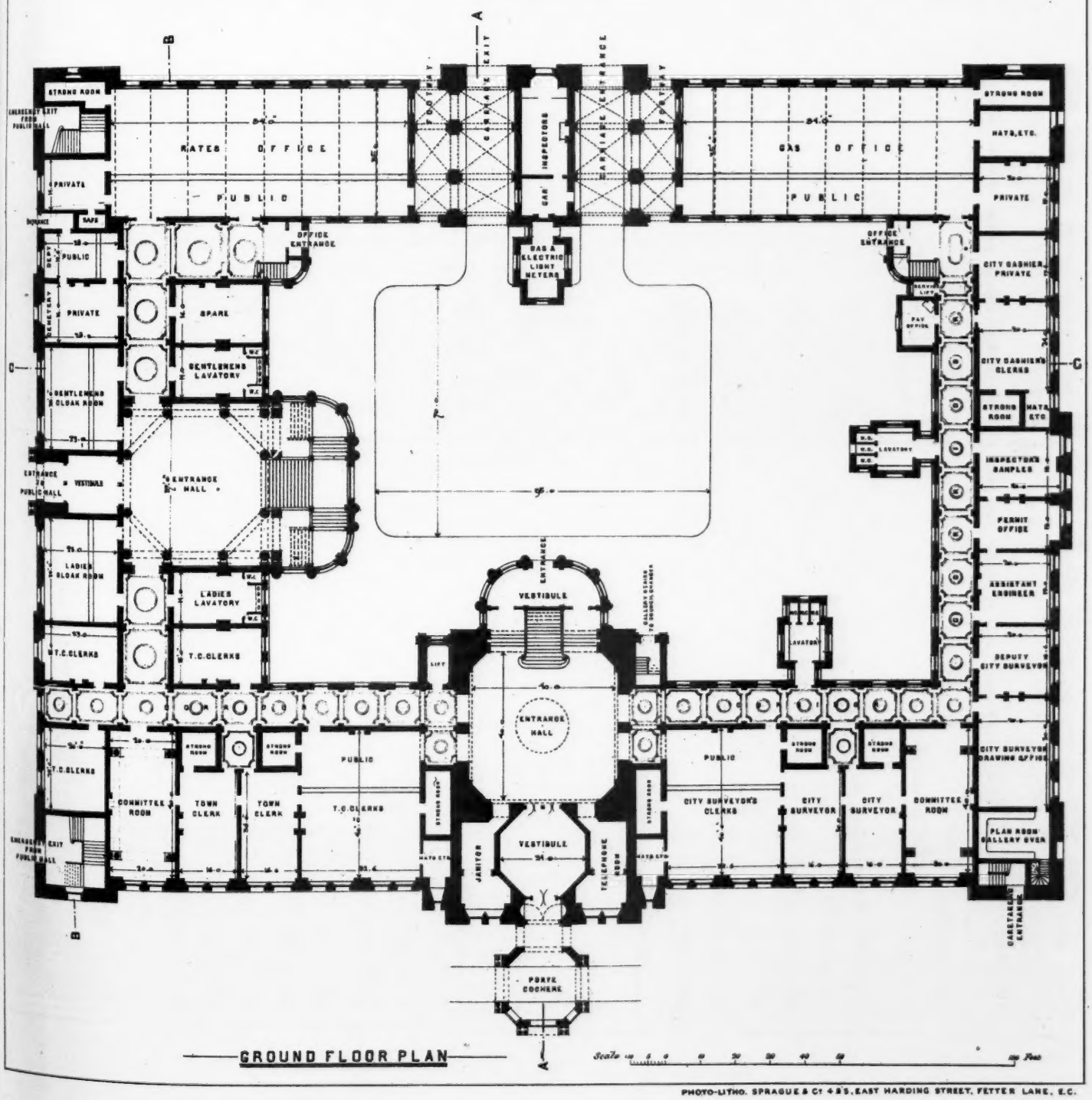

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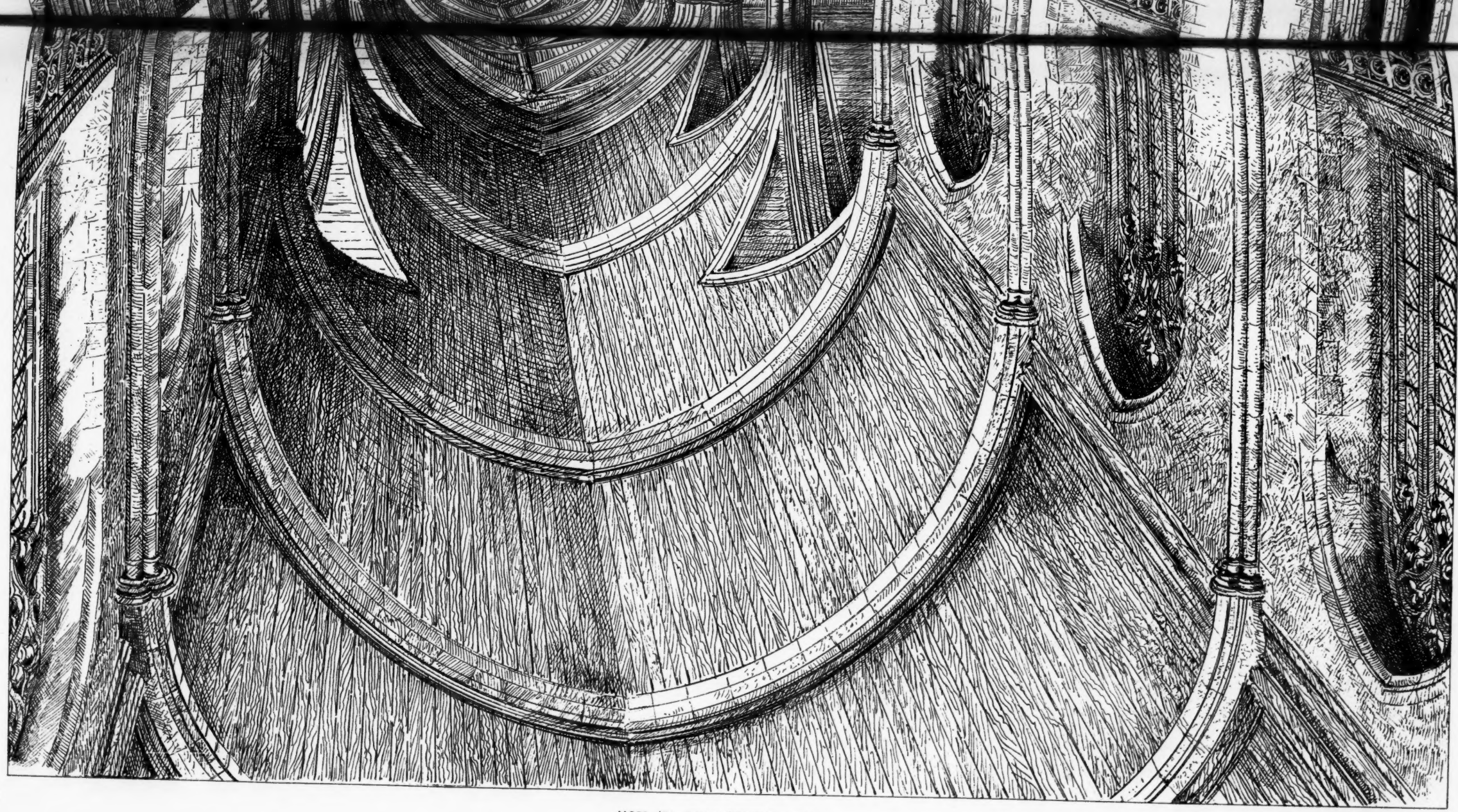

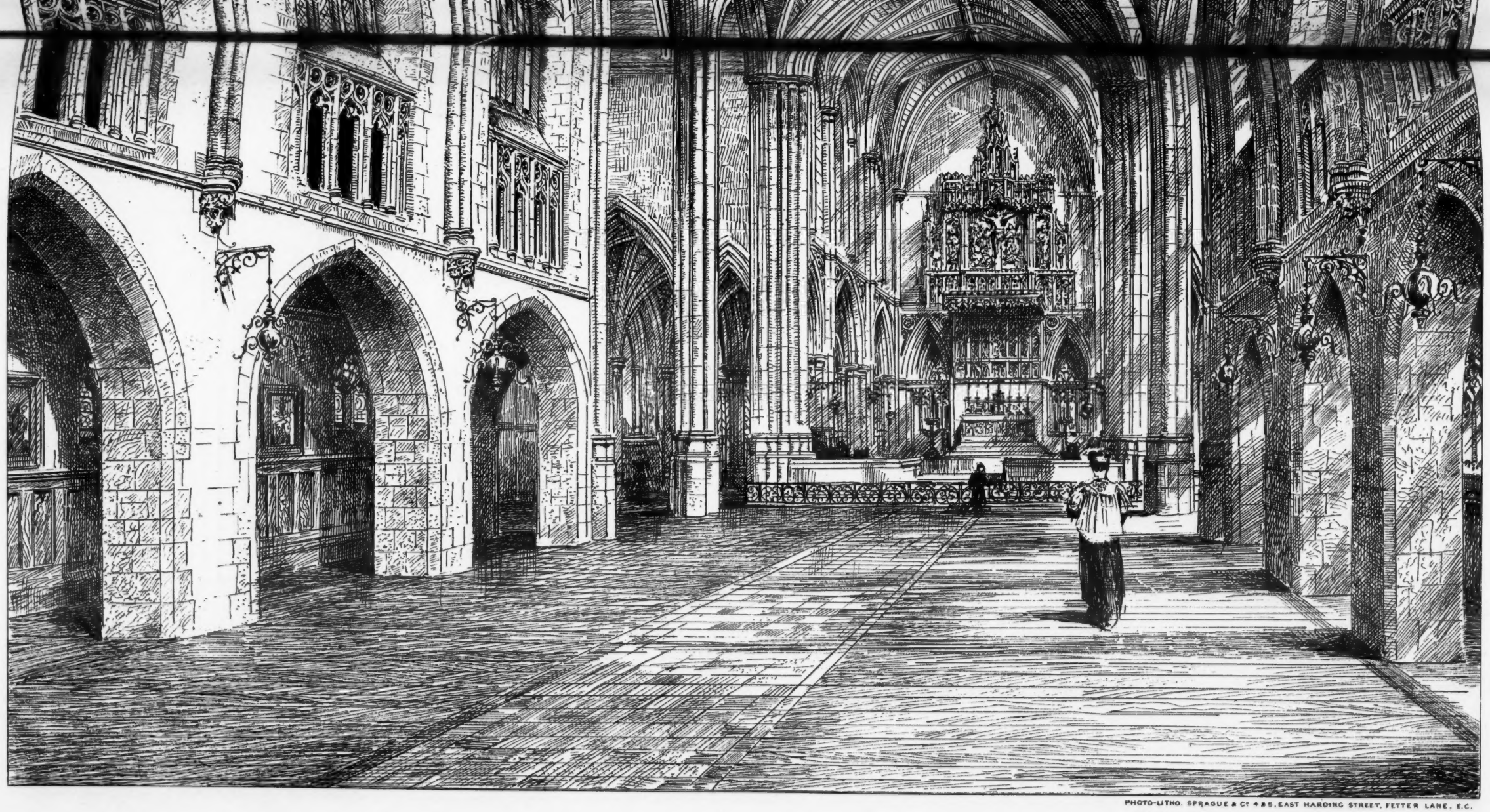

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